

Ramsar Information Sheet

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BrazilGuaporé Biological Reserve



Designation date 22 March 2017 Site number 2297

Coordinates 12°31'10"S 62°47'26"W

Area 600 000,00 ha

https://rsis.ramsar.org/ris/2297 Created by RSIS V.1.6 on - 18 May 2020

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary

Guapore Biological Reserve is a federal conservation unit with integral protection, considered of extremely high importance for the conservation of biological diversity in the Amazon (MMA, 2007) and highly effective in terms of protection, since it has kept more than 99 % of its forest coverage intact. It is characterized by comprising a remarkable heterogeneity of habitats resulting from its location, a transition region between the Amazon Forest and the Cerrado, with a predominance of aquatic ecosystems (Junk et al., 2013) represented by wetlands and extensive floodplains from rivers of clear water, lakes/lagoons, canals, bays and creeks. The Reserve encompasses a diverse flora, mainly herbaceous formations (grasslands) and forests ("igapó" forests and gallery) seasonally flooded, including wide "buritizais" and flooded savannas. It hosts a rich and diverse fauna, including endangered species.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

Name	Greice Oliveira							
Institution/agency	Reserva Biológica do Guaporé – ICMBio							
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Phone	00 55 69 3651-3782							

2.1.2 - Period of collection of data and information used to compile the RIS

From year 2013

To year 2013

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)

Guaporé Biological Reserve

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image

<1 file(s) uploaded>

Former maps 0

Boundaries description

The boundaries of the Ramsar site coincide with the Guapore Biological Reserve, described in its legal instrument of creation (Federal Decree No. 87587 of September 20, 1982). To the north, the site is bounded by the São Miguel River, by the Preta Lagoon, by the Indigenous Land of Rio Branco and by the Igarapé (stream) Sete Galhos, to the east by Igarapé Consuelo and the Colorado River; to the south by the Extractive Reserve Pedras Negras, a farm called Pau D'Óleo and the Guaporé river (the Brazilian international border with Republic of Bolivia); and to the West, by the São Miguel river (Brasil,1984).

2.2.2 - General location

a) In which large administrative region does the site lie?	State of Rondônia
b) What is the nearest town or population	Costa Marques

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries?

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party?

2.2.4 - Area of the Site

Official area, in hectares (ha): 600000

Area, in hectares (ha) as calculated from GIS boundaries 615836.88

2.2.5 - Biogeography

Biogeographic regions

Biogeographic regions	
Regionalisation scheme(s)	Biogeographic region
Other scheme (provide name below)	Neotropical

Other biogeographic regionalisation scheme

Bioregion Amazon - rainforest ecoregion of Rondônia/Mato Grosso (Dinerstein et al, 1995).

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

☑ Criterion 1: Representative, rare or unique natural or near-natural wetland types

Hydrological services provided

Guapore Biological Reserve constitutes one of the most unique and largest protected areas in Brazil (600,000 ha) comprising representative samples of forests (igapós) seasonally flooded by rivers of clear water and flooded grasslands, both types of wetlands poorly known and preserved in the Brazilian Amazon. These samples of forests are very representative for the Amazon region and also comprises gallery forests, marshy areas and "buritizais", besides natural portions of flooded savannas ("cerradão" or forested savanna). The complex and diverse hydrologic/vegetation mosaic observed in the reserve includes samples of different types of wetlands peculiar to the plains and swamps of the Guapore river vallev.

- ☑ Criterion 2 : Rare species and threatened ecological communities
- ☑ Criterion 3 : Biological diversity

According to the Biological Diversity National Program (PRONABIO - MMA, 2007) the region in the middle reaches of the Guapore river, where the Guapore Biological Reserve is located, is classified as an "Area of Extreme Biological Importance." and among the priority areas for biodiversity conservation in Brazil. PRONABIO also highlights that the reserve has priority "A" ("Conservation Unit of Extreme Importance") and considers it as "extremely important" for the conservation of birds, reptiles and amphibians and of "Very High Importance" for the conservation of aquatic biota and mammals, being its main recommended goal, protection (Brasil,2001, Brasil,2007a, Brasil, 2007b). The Reserve also constitutes one of the most important protected areas that comprise the Ecological Binational Corridor Bolivia-Brazil, called 'Ecological Corridor Guaporé-Itenez/Mamoré' (Bisaggio, 2011). The biological diversity in the Reserve is characterized by the existence of communities rich in species and representative of the biogeographic region in which it is inserted. Specifically, in relation to the wetlands of the reserve, some notable peculiarities are observed. The flooded forests (igapó) shelters eight species of primates, a similar species richness that is found in the upland forests of the Reserve, and the highest total biomass of primates among all vegetation types (414.9 kg/km²) (Alves, 2006, Alves, 2009, Alves e Santos Junior, 2010, Alves et al, 2012, Alves, 2013). The flooded forests (igapó) of the Guapore Biological Reserve are also responsible for sustaining one of the highest population densities ever recorded in the Amazon of the threatened black-face spider monkey (Ateles chamek, 26.6 individuals/km²) and the highest biomass of this species throughout the reserve (249.5 kg/km²) (Alves, 2013). The rivers and lagoons of the Reserve are unique to the maintenance of residual populations of the endangered species; however, one of the most notable features of the Guapore Biological Reserve is the role that their flooded grasslands play for the maintenance and survival of those who are considered the last relictual populations (and one of the greatest concentrations) of threatened species Blastocerus dichotomus (cervo-do-Pantanal) in the western Amazonia (Brasil, 1984, Tomas e Tiepolo, 2007, Bisaggio, 2011, Duarte et al, 2012).

Justification

- ☑ Criterion 4 : Support during critical life cycle stage or in adverse conditions
- Criterion 7 : Significant and representative fish

The fish fauna of the Guapore Biological Reserve presents a remarkable diversity, both in terms of number of species, as in regards to the lifestyle and reproductive/behavioral strategies of these species; being representative of the basins that drain to the valley of the Guapore river and adjacent systems (e.g. Mamore River). Preliminary sampling performed in Guapore River and its main tributaries identified more than 170 species of fish (Doria et al. 2004, Doria et al. 2008). Species representing different groups with different ecological characteristics are observed occupying the main types of wetlands in the Reserve. This includes species that live in open areas of the rivers (Pellona spp.), species that are typically of lakes, streams and riverbanks (Schizodon spp. And Leporinus spp.), habitat-specific species that occur in rivers of clear water (Brycon spp. and Myleus spp.) and species that live at the bottom of lakes and rivers (Oxydoras niger, Liposarcus pardalis). The aquatic environments of the Reserve also facilitate the maintenance of populations of the endangered Colossoma macropomum (tambagui), considered one the most important fish, both among the fishing industry, as for fish farming throughout the Amazon region. It also shelters other fish species considered to have significant commercial importance in the Amazon, especially in fish markets in the Guapore river valley: Phractocephalus hemiliopterus ('pirarara'). Cichla spp. (peacock bass), Serrassalmus spp. ('piranha'), Piaractus brachypomus (pirapitinga), Pseudoplatystoma fasciatum ('pintado', "surubim') and P. tigrinum ('caparari').

Justification

☑ Criterion 8 : Fish spawning grounds, etc.

Sand banks, usually situated on the margins or even forming islands mainly along the Guapore River, are important since they shelter highly adapted species, as some representatives of the Hemiodontidae family (Hemiodus spp.), that use these environments to obtain food resources. Very different ecological characteristics are observed in relation to the trophic structure of fish communities in the Reserve, with the occurrence of piscivorous (57%), carnivores (24%), herbivores (11%), omnivores (5%) and iliophagous (3%) species. The flooded grasslands serve as breeding ground for fish populations, which depend on the hydrological cycle of the basin; having fewer predators than in the river channel, the young fish use these areas as a refuge. The fish spawning usually occurs during the flooding of the rivers. Thus, the eggs produced are carried by the current, usually conducted to lakes/lagoons and bays, or even portions of rivers further downstream, where they develop. Other species observed in the Reserve have special types of spawning, such as those that leave gonadal products in floating nests (Hoplosternum spp., Callichthyidae), in holes dug in the bottom or riverbanks (Liposarcus pardalis, Loricariidae) and on hard substrates (Cichla spp., Cichlidae). Rivers, streams and lakes of the Reserve provide protection and guarantee the survival of migrant fish species occurring in the Guapore River and its tributaries, once breeders move to places where the environmental conditions are more appropriate for the success of their offspring. This means environments where there is less probability of predation and increased food supply.

☑ Criterion 9 : >1% non-avian animal population

3.2 - Plant species whose presence relates to the international importance of the site

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Bertholletia excelsa		>			VU Sign			
Copaifera langsdorfii	Copaiba Balsam; Balsam Copaiba		✓					
Hevea brasiliensis	rubber-tree		 ✓					

Regarding the vegetation of the reserve, we observe a massive floristic diversity resulting from the ecotone between the Amazon and Cerrado (forest and savanna formations, respectively) biomes, combined with the physiographic peculiarities of the region (Dinerstein et al, 1995).

3.3 - Anima	al species wh	nose present			ernational in	mportar	nce of t	ne site	!			
Phylum	Scientific name	Common name	Species qualifies under criterion 2 4 6 9	Species contributes under criterion 3 5 7 8	Pop. Size Period of po	op. Est. occu	% IUC urrence 1) Lis	N CITES d Append t I	6 CM lix Apper I	Sidix	Other Status	Justification
Birds												
CHORDATA/ AVES	Harpia harpyja	Harpy Eagle					NT ##	₽				
CHORDATA/ AVES	Morphnus guianensis	Crested Eagle					N7			W		National Regulation
CHORDATA/ AVES	Pandion haliaetus	Osprey, Western Osprey										reproductive season
Fish, Mollusc	and Crustacea					·	·	<u>'</u>	<u>'</u>	<u>'</u>		
CHORDATA/ ACTINOPTERYGI	Colossoma macropomum	Red bellied pacu										migration
CHORDATA/ ACTINOPTERYGI												
CHORDATA/ ACTINOPTERYGI	Phractocephalus hemioliopterus	Redtail catfish										Spawning
CHORDATA/ ACTINOPTERYGI	Piaractus	Cachama										Spawning
CHORDATA/ ACTINOPTERYGI	Pseudoplatystoma fasciatum	Barred sorubim										Spawning
CHORDATA/ ACTINOPTERYGI	Pseudoplatystoma tigrinum	Tiger sorubim										Spawning
Others							·	<u>'</u>	<u>'</u>	<u>'</u>		
CHORDATA/ MAMMALIA	Alouatta caraya	Black Howler; Paraguayan Howler					LC					
CHORDATA/ MAMMALIA	Aotus nigriceps	Black-headed Night Monkey					LC					
CHORDATA/ MAMMALIA	Ateles chamek	Black Spider Monkey, Peruvian Spider Monkey	2 000				EN G					
CHORDATA/ MAMMALIA	Atelocynus microtis	Short-eared Dog					N7			W		National Regulation
CHORDATA/ MAMMALIA	Blastocerus dichotomus	marsh deer		10000	3733 2012		15 V.	2				
CHORDATA/ MAMMALIA	Bradypus variegatus	Brown-throated Sloth; Brown- throated Three- toed Sloth					LC					
CHORDATA/ MAMMALIA	Cerdocyon thous	Crab-eating Fox					LC					
CHORDATA/ MAMMALIA	Coendou prehensilis	Brazilian Porcupine					LC					
CHORDATA/ MAMMALIA	Cuniculus paca	Lowland Paca										

Phylum	Scientific name	Common name	qi t cr	pecies ualifies under riterion 4 6 9		Species contributes under criterion	Size	p. Peri	iod of pop	o. Est. º	% occurrence 1)	IUCN ce Red List	CITES Appendix I	CMS Appendix I	C	Other S	tatus	Justification	
CHORDATA/ MAMMALIA	Dasyprocta punctata	Central American Agouti										LC ©SP							
CHORDATA/ MAMMALIA	Didelphis marsupialis	Common Opossum										LC Str							
CHORDATA/ MAMMALIA	Eira barbara	Tayra			-							LC Sign							
CHORDATA/ MAMMALIA	Inia geoffrensis boliviensis	Bolivian River Dolphin	2									NT ●数 ●解			EN			National Regulation	
CHORDATA/ MAMMALIA	Isothrix bistriata	Yellow-crowned Brush-tailed Rat										LC Sign							
CHORDATA/ MAMMALIA	Lontra longicaudis		2										\checkmark						
CHORDATA/ REPTILIA	Melanosuchus niger	jacaré-açu	Ø 6	2 00									V					dryseason	
CHORDATA/ MAMMALIA	Myrmecophaga tridactyla	Giant Anteater	2									VU ●\$* ●SP							
CHORDATA/ MAMMALIA	Nasua nasua	South American Coati										LC Sign							
CHORDATA/ MAMMALIA	Neacomys spinosus	Bristly Mouse; Common Neacomys										LC Str							
CHORDATA/ MAMMALIA	Panthera onca	Jaguar	2									NT	V						
CHORDATA/ MAMMALIA	Pithecia irrorata irrorata	Gray's Bald-faced Saki																	
CHORDATA/ REPTILIA	Podocnemis expansa	tartaruga-da- amazônia		2 00								LC Str						Spawning	
CHORDATA/ REPTILIA	Podocnemis unifilis			2 00								VU Single						Spawning	
CHORDATA/ MAMMALIA	Potos flavus	Kinkajou										LC Sign							
CHORDATA/ MAMMALIA	Pteronura brasiliensis	Giant Otter	V	000								EN OTH	V						
CHORDATA/ MAMMALIA	Saguinus weddelli				-														
CHORDATA/ MAMMALIA	(API)	Bare-eared Squirrel Monkey; Golden-backed Squirrel Monkey										NT							
CHORDATA/ MAMMALIA	Sapajus apella											LC Single							
CHORDATA/ MAMMALIA	Tamandua tetradactyla	Southern Tamandua										LC St St							
CHORDATA/ MAMMALIA	Tapirus terrestris	Brazilian Tapir; South American Tapir	2									VU ●\$ ◎ \$							

Phylum	Scientific name	Common name	Species qualifies under criterion	Criterion	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ MAMMALIA	Tayassu pecari	white-lipped peccary					VU STEP				

¹⁾ Percentage of the total biogeographic population at the site

The high heterogeneity of habitats occurring in the Guapore Biological Reserve, predominantly represented by wetlands, enables the existence of communities rich in species and the maintenance of viable populations of several endangered species. The water bodies of the Reserve (rivers, bays, lakes/ponds, streams) support important populations of threatened species.

Under Criteria 4, marginal lakes and ponds of the Guapore river are particularly favorable sites for sheltering and providing food resources to the populations of alligators Melanosuchus niger, during the dry season. The numerous sandbars and beaches formed during the dry season in the Guapore Biological Reserve play a critically important role for species of migratory aquatic birds and turtles. Regarding birds, for example, the "águia-pescadora" Pandionha liaetus is observed in the Reserve during the reproductive rest of the species, for example, when it is winter in the northern hemisphere and individuals perform migrations to the southern hemisphere. The same is true for species of sandpipers of the genus Calidris spp. that migrate during the Arctic winter to the south, and the Guapore Biological Reserve is one of these sites which shelters groups of species during such periods. As for turtles, during the river floods, the species Podocnemis expansa and P. unifilis occupy different wetlands of the reserve, such as bays, lakes, flooded forests and rivers. However, each year, from the month of June, during the early breeding season, males and females of both species begin migrating out of these environments looking for beaches, especially along the Guapore river, to spawn collectively (Brasil, 1984, Fachin-Terán et al, 1995; Fachin-Terán e Vogt, 2004, Schneider et al, 2011).

It is estimated that flooded grasslands occurring in the Guapore Biological Reserve and in some surroundings areas, shelter a population of 3,733 ± 582 individuals of Blastocerus dichotomus (cervo-do-Pantanal), with a density of 0.45 ± 0.07 individuals per km² (Tomas& Tiepolo, 2007). These estimates indicate that the Guapore Biological Reserve shelters regularly a percentage of >1% of the total population of this species, currently estimated at 25,000 mature individuals in Brazil (Duarte et al., 2012).

3.4 - Ecological communities whose presence relates to the international importance of the site

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
Alouatta caraya		bugio-preto	
Flooded forest		Igapó	

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

Three main types of habitats can be observed in the Guapore Biological Reserve: the flooded terrain, the terrain not subject to flooding and the aquatic habitat. The flooded terrain environments are constituted by flooded forests (igapó), the grasslands, by the "Cerradão" and gallery forests; the non-flooded environments by the upland forests, the savanna formations ("campo cerrado") of the Serra João Antunes and Serra Colorado; and the aquatic environments by the Guapore, São Miguel, Branco, São Simão, Massaco and Colorado rivers, by the Preta Lagoon (with an area > 500 ha) and by streams, springs and lakes/lagoons.

The area of the Reserve encompasses diverse plant formations, including areas periodically and/or permanently flooded, that present a peculiar physiognomic identity (Brasil,1984). As for the floodplain forests, two types of permanently flooded forests are observed in the Guapore Biological Reserve based on vegetation structure:

i. Open floodplain forest: corresponds to about 17% of the total area, occurs in the north-central region of the Reserve, adjacent to upland forests and subject to seasonal flooding of São Miguel and Branco rivers for 5-6 months per year, with a flood pulse amplitude from 0.3 to 1.0 meter high. It is characterized physiognomically by the strong presence the palm genera Euterpe (acai), Mauritia (Buriti), Iriartea (paxiúba) and Astrocaryum (murumuru), besides presenting great diversity of species of Leguminosae.

ii. Dense floodplain forest: corresponds to about 3% of the total area, occurring on the south of the Reserve, is interspersed with bays and lagoons and influenced by the seasonal flooding of the Guapore River during 6-7 months per year, with a flood pulse width of 0.8 to 3.0 meters high.

The gallery forests, located in the seasonal floodplains of the San Miguel river margins, are restricted to narrow forested strips of width ranging from 50 to 1500 meters, surrounded by open vegetation, non-forest vegetation (grasslands), with a flood pulse amplitude from 0.3 to 1.2 meters high. Moreover, the southern boundary of the Reserve has unique portions of floodplain grasslands ("cerradão" or forested savanna), with a micro-topography characterized by small elevations of the terrain that are not subjected to flooding, arranged on a plain seasonally flooded by the Guapore river. Regarding flooded grasslands, they occur in distinct stages, as co-dominant in the landscape of the reserve, mainly in the Midwest region between the rivers of São Miguel and Branco, but also in the southeast portions of the Reserve.

In the floodplain forests (igapó) and in the gallery forests there are populations of Alouatta caraya ('bugio-preto'), whose observations on the Guapore Biological Reserve constitute the first records of the occurrence of this species in the state of Rondônia,

The aquatic environments of the Reserve facilitate the maintenance of populations of the endangered Colossoma macropomum (tambaqui), considered one the most important fish, both among the fishing industry, as for fish farming throughout the Amazon region. It also shelters other fish species considered to have significant commercial importance in the Amazon, especially in fish markets in the Guapore river valley.

These environments are also unique habitats for the conservation of other species intrinsically associated with these wetlands, for example, the Amazonian turtles, which in the Reserve are represented by five species. The same applies to the crocodilians, mammals and aquatic birds, all of them with singular species in the Guapore Biological Reserve (see criterion 4).

4.2 - What wetland type(s) are in the site?

Inland wetlands

irilariu wellarius				
Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Flowing water >> M Permanent rivers/ streams/ creeks		3		Representative
Fresh water > Marshes on inorganic soils >> Tp: Permanent freshwater marshes/ pools		2	120000	Representative
Fresh water > Lakes and pools >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		1	126000	Representative

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
upland forest	156000

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
Aspidosperma album	araracanga	
Cedrela odorata	Cedro	
Hymenolobium excelsum	angelim	
Inga alba	Ingá	
Mezilaurus itauba	itaúba	
Sclerolobium melanocarpum	taxi-vermelho	
Vochysia guianensis	Quaruba	

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATA/REPTILIA	Phrynops geoffroanus	cangapara				

Invasive alien animal species

Phylum	Scientific name	Common name	Impacts
CHORDATA/MAM/MALIA	Bubalus bubalis	water buffalo	Potentially

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
A: Tropical humid climate	Aw: Tropical savanna (Winter dry season)

The average annual rainfall ranges from 1500-1660 mm, with two markedly distinct seasons: dry (May to October) and rainy (November to April). The rainy season accounts for about 70% of the annual precipitation, with the first quarter of the year having the highest rainfall. The average rainfall for the driest months of the year are is less than 50 mm/month. The relative humidity is less than 80%. The annual average temperature is of 25°C, being 33°C the mean maximum in the warmest quarter (August to October) and 15 °C the average minimum in the coldest quarter (May to July).

4.4.2	- (Jeo!	mor	phic	settir	ng

a) Minimum elevation above sea level (in metres)
a) Maximum elevation above sea level (in metres) 495
Entire river basin
Upper part of river basin
Mddle part of river basin
Lower part of river basin 🗵
More than one river basin
Not in river basin
Coastal C

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean

The basins of major rivers in the state of Rondônia, Brazil, that drain the Guapore river basin are the Cabixi, Pimenteiras, Corumbiara, Verde, Mequéns, Massaco, São Simão, Branco, Sao Miguel, Cautarinho, São Domingos and Cautário rivers. These rivers originate, in most cases, in the Chapada (Sierra) of Parecis and flow in the north-south direction, extending not more than 100 km, except São Miguel and Cautário exceeding 160 km from its origin through the mouth of the Guapore river. The main river basin, the Guapore river is born in the southern foothills of the 'Chapada do Parecis', at altitudes of approximately 650 m. Most of its route acts as a dividing line between Brazil and Bolivia.

4.4.3 - Soil

Mineral Organic 🗹 No available information \Box Are soil types subject to change as a result of changing hydrological Yes O No

Please provide further information on the soil (optional)

conditions (e.g., increased salinity or acidification)?

In the Reserve, various types of mineral soils occur, predominantly Oxisols, Plinthosols, Cambisols, Espodosols and Gleysols. In addition to these units, patches of Neosols still occur in small areas, consisting of mineral material or slightly thicker organic material (RADAM Brasil,1979).

4.4.4 - Water regime

valor pormanono		
Presence?		
Usually permanent water		
present		

Source of water that maintains character of the site			
Presence?	Predominant water source		
Water inputs from surface water			
Water inputs from rainfall			

Water destination

Presence?			
	Feeds groundwater		
	To downstream catchment		

Stability of water regime	
Presence? Water levels fluctuating	
(including tidal)	
4.4.5 - Sediment regime	
•	diments occurs on the site
· ·	_
Significant accretion or deposition of sec	
Significant transportation of sediments oc	_
Sediment regime is highly variable, either s	
8	Sediment regime unknown 🗹
Please provide further information on sedime	
The Guapore River carries low amou	unts of suspended material, except during the rainy season (Abe,2007).
(ECD) Water turbidity and colour	All major rivers of the Guapore Biological Reserve are classified as rivers of clear water, with intermediate fertility
(ECD) Water temperature	average water temperature is 25.7 ° C
valer lemperature	average water temperature is 25.7 C
4.4.6 - Water pH	
The Wale pri	Asid (all Let Ex.
	Acid (pH<5.5) □
C	ircumneutral (pH: 5.5-7.4)
	Alkaline (pH>7.4) ☑
	Unknown
Please provide further information on pH (opti	
Chemical conditions of the water an to 7.8.	d soil of the Guapore river floodplains are variable. Analysis indicate that the Guapore river has a pH of 6.8
<u> </u>	
4.4.7 - Water salinity	
•	Fresh (<0.5 g/l) □
Mivobalino /brack	ish)Mxosaline (0.5-30 g/l) □
,	
	haline/Eusaline (30-40 g/l)
Hyperh	aline/Hypersaline (>40 g/l) ☐
	Unknown ☑
4.4.8 - Dissolved or suspended nutrie	ents in water
4.4.0 Dissolved of suspended name	
	Eutrophic Signature of Signat
	Mesotrophic 🗹
	Oligotrophic ☑
	Dystrophic □
	Unknown 🗆
Please provide further information on dissolve	
Due to its good state of preservation	n it shows a moderate state of eutrophication (oligotrophic to mesotrophic).
(ECD)	
(EGD) Water conductivity	Average electrical conductivity is 92.7 m S cm-1
4.4.9 - Features of the surrounding an	as which may affect the Cita
Please describe whether, and if so how, the characteristics in the area surrounding the F	landscape and ecological Ramsar Site differ from the i) broadly similar O ii) significantly different site itself:
Surrounding area has greater urt	panisation or development
Surrounding area has higher	human population density 🗹
	e intensive agricultural use 🗹
Surrounding area has significantly different	
Please describe other ways in which the surro	*
In the surroundings of the Guapore E	Biological Reserve, areas for protection and nature conservation (protected areas), large private properties cattle ranching, and small farms and settlements practicing farming and fishing livelihoods, can be

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	High
Fresh water	Drinking water for humans and/or livestock	High

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	High
Climate regulation	Local climate regulation/buffering of change	not relevant for site

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Picnics, outings, touring	Medium
Recreation and tourism	Nature observation and nature-based tourism	Medium
Scientific and educational	Major scientific study site	High
Scientific and educational	Educational activities and opportunities	not relevant for site
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	High

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganizms, the genes they contain, and the ecosystems of which they form a part	High

Other ecosystem service(s) not included above:

The area of the Guapore Biological Reserve consists predominantly of extensive floodplains, of fundamental and great value to the ecology of the region, contributing directly. One of the main services provided by the wetlands of the Guapore Biological Reserve is the periodic water storage and its slow return to the streams and connected rivers, thereby reducing the fluctuations of the water level and the risk of catastrophic floods and droughts. Among other benefits to the natural environment and the population of the middle reaches of the Guapore river, are: the recharge of aquifers and groundwater, water purification, microclimate regulation and the maintenance of aquatic biodiversity and intra-and transcontinental migration processes.

Within the site:	100
Outside the site:	50000

Have studies or assessments been made of the economic valuation of Yes O No O Unknown © ecosystem services provided by this Ramsar Site?

4.5.2 - Social and cultural values

i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and \Box use that maintain the ecological character of the wetland

ii) the site has exceptional cultural traditions or records of former \checkmark civilizations that have influenced the ecological character of the wetland

Description if applicable

Approximately 65 % of the total area of the Guapore Biological Reserve is overlapped with the Indigenous Land of the Massaco, home of isolated indigenous groups (uncontacted). This overlap portion is located in the eastern part of the Reserve and includes the Serra João Antunes, where there are numerous headsprings of rivers and streams, as well as part of the Branco, São Simão, Massaco and Colorado rivers. In this area there are still flooded grasslands and forests (igapó). Thus, it can be assumed that there is a significant association of these isolated indigenous people with the wetlands mentioned above. The northern portion of the Reserve is contiguous with the Indigenous land of Rio Branco, of about 240,000 ha, where indigenous people of the Makurap, Tupari and five other groups, maintain historical link with the area of the Reserve, since their villages are distributed along the riverbanks of the Branco river, which connects the two protected areas. Indigenous people use the extension of the Branco river, inserted in the Reserve, as a mean of transportation to the Guapore river.

In the Guapore Biological Reserve, archaeological sites of extreme importance and, historical and cultural relevance, for the Guapore river valley region, can be found. Two housing-sites, with the remains of pottery, are located on the right bank of the Guapore river (sites 'Limeira' and 'Espirito Santo'), with dimensions of 800x150 and 500x200 meters, respectively. In the central region of the Reserve, on an island in the Branco River, lies a housing-site with the occurrence of fluvial gastropod sambaquis (deposits resulting from human activities consisting of shells of gastropod mollusks), denominated 'Monte Castelo' site, it has approximately 100 meters in diameter. Two other archeological sites are observed in areas surrounding of the Reserve, adjacent to its boundaries (sites 'Pau D'Oleo' and 'Baía Rica').

iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples

iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological Character of the wetland

4.6 - Ecological processes

<no data available>

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

	wners	

Category	Within the Ramsar Site	In the surrounding area
National/Federal		
government	Se.	

Private ownership

Category	Within the Ramsar Site	In the surrounding area		
Other types of private/individual owner(s)		2		

Other

Category	Within the Ramsar Site	In the surrounding area
Unspecified mixed ownership		2

Provide further information on the land tenure / ownership regime (optional):

Within the Ramsar Site. The whole area of the Guapore Biological Reserve is considered the property of the Federal Government of Brazil and no titles are issued to private owners. However, a community of about 20 families of 'Quilombolas' (ethnic group consisting of African - Brazilian descendants of slaves) occupy about 7,000ha of the reserve (1% of total area), on the banks of the Guapore river. Currently, there is an ongoing process for the regularization and issuance of titles to the members of this community.

5.1.2 - Management authority

Please list the local office / offices of any
agency or organization responsible for
managing the site:

Chico Mendes Institute for Biodiversity Conservation - ICMBio

Coordenação Regional nº 1

Reserva Biológica do Guaporé - ICMBio

Provide the name and title of the person or people with responsibility for the wetland:

Ana Rafaela Damico, Coordenadora Regional, Greice Oliveira, Manager

ICMBio Coordenação Regional nº 1 Avenida Lauro Sodré, nº 6.500

Aeroporto - Porto Velho - Rondônia- Brazil

CEP: 76.803-260.

Postal address: Reserva Biológica do Guaporé – ICMBio

Avenida 05 de Maio, nº 1.028

Setor 02 - Costa Marques - Rondônia

CEP: 76.937-000

E-mail address: greice.oliveira@icmbio.gov.br

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

riuman sewements (non agn	cuiturai)			
Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Housing and urban areas	Medium impact			✓

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Roads and railroads	Medium impact			✓

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Fishing and harvesting aquatic resources	High impact		✓	
Logging and wood harvesting	Medium impact			✓
Hunting and collecting terrestrial animals	High impact			✓

High impact

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Fire and fire suppression	High impact		1	
Invasive and other problemati	ic species and genes			

5.2.2 - Legal conservation status

National legal designations

Invasive non-native/alien

species

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Biological Reserve	Guaporé	Federal Decree No. 87587 of September 20, 1982	whole

 \checkmark

5.2.3 - IUCN protected areas categories (2008)

la Strict Nature Reserve
lb Wilderness Area: protected area managed mainly for wilderness protection
II National Park: protected area managed mainly for ecosystem protection and recreation
III Natural Monument: protected area managed mainly for conservation of specific natural features
IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention
V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation
VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems

<no data available>

5.2.4 - Key conservation measures

Legal protection

Legal proteotion	
Measures	Status
Legal protection	Implemented

Human Activities

Measures	Status
Communication, education, and participation and awareness activities	Proposed

Other:

Environmental education activities are conducted with students from public schools in neighboring counties, especially regarding the issue of forest fires and their causes, consequences, prevention and combat forms. Such activities are developed in a way to present the Reserve as an integral protection area, showing its importance in the conservation of flora and fauna, especially endangered species, thus highlighting the damage that fire can bring to the natural environments.

Every year, since 2001, the Reserve performs a training called 'Curso de Formação de Brigadas para Prevenção e Combate aos Incêndios Florestais' (Brigade Training Course for Prevention and Combat of Forest Fires), empowering thirty (30) participants on issues related to natural fires. Of this total, fourteen (14) participants are selected to be hired temporarily for a period of 6 months (July to December). Thus, they form a brigade to prevent and combat fires on the Reserve, whose main activity is the application of techniques to reduce the risk of fire outbreaks (e.g. preparation of firebreaks, clearing of trails) and also to combat fires in loco that affect the area.

5.2.5 - Management planning

Is there a site-specific management plan for the site? Yes

Has a management effectiveness assessment been undertaken for the site? Yes O No •

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning Yes O No oprocesses with another Contracting Party?

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site:

Every year, since 2001, the Reserve performs a training called 'Curso de Formação de Brigadas para Prevenção e Combate aos Incêndios Florestais' (Brigade Training Course for Prevention and Combat of Forest Fires), empowering thirty (30) participants on issues related to natural fires

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No need identified

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Animal species (please	Implemented
specify)	iii promontou

Since the year 2010, a project called 'Primates in protected areas of the Amazon, it is being prepared management plans and the assessment of the species conservation status' is being developed at the Guapore Biological Reserve, whose goal is to generate data on the occurrence of primates in protected areas of the Amazon, in order to support the management plans, action plans and the correct assessment of the species conservation status.

In the year 2012, the project 'Inventory of terrestrial mammals of medium and large size, as subsidies towards the management of less known Federal Conservation Units' began, seeking to obtain, through visual contact, vocalizations, evidence and records through camera traps, the richness of mammals of medium and large size in conservation units with gaps in knowledge, and also for those who need information to assist in further development of management actions due to human pressures (Beisiegel et al., 2013).

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Bibliographical references are in the RIS of the Site in section 6.1.2

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3) $\,$

<no file availables

ii. a detailed Ecological Character Description (ECD) (in a national format)

<no file available

iii. a description of the site in a national or regional wetland inventory

<no file available>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<no file available>

vi. other published literature

<1 file(s) uploaded>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



Aerial view Guaporé (*icmbio*, 12-01-2010)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation 2017-03-22