

# Ramsar Information Sheet

Published on 13 June 2018

# **Brazil**

# Fernando de Noronha Archipelago



Designation date 25 January 2018
Site number 2333
Coordinates 03°51'40"S 32°24'09"W
Area 10 929,20 ha

https://rsis.ramsar.org/ris/2333 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

The archipelago of Fernando de Noronha consists of 21 islands, islets and rocks of volcanic origin, with 26 km2. The main island has an area of 18.4 km2, the major axis has around 10 km, with a maximum width of 3.5 km and a perimeter of 60 km. The main island, that has the same name as the archipelago, constitutes 91% of the total area, and has patches of the Atlantic rainforest with the only known oceanic mangrove in the South Atlantic; areas with high productivity and biological diversity, become areas of great importance for the maintenance of local communities, as well as being one of the locations of greatest relevance in the South Atlantic for resting, breeding, and feeding for migratory species, as both the Nearctic (North America) and the Palearctic species (Europe, Asia, and North Africa) (MMA/IBAMA, 2005). The archipelago is also listed on the UNESCO's list as a Natural World Heritage site, together with Atol das Rocas (MMA,2001), another Ramsar site.

The marine ecosystem of Noronha - another component of the insulate ecosystem – presents a greater stability compared to the biological evolution of the natural terrestrial environment, although small variations and increase in species richness and density of fauna and flora occur. Of unparalleled beauty, the colors of the sea surrounding the islands enchant their visitors: turquoise blue and emerald tones foreshadow an amazing underwater world in its variety of colors and species.

## 2 - Data & location

## 2.1 - Formal data

#### 2.1.1 - Name and address of the compiler of this RIS

## Compiler 1

Name	Felipe Cruz Mendonça
Institution/agency	Núcleo de Gestão Integrada de Noronha - ICMBio
Postal address	Avenida Eurico Cavalcante de Albuquerque, nº 174, Bairro do Boldró. CEP: 53.990-000. Fernando Noronha/PE.
E-mail	fernandodenoronha@icmbio.gov.br
Phone	+55 81 3619 1220
Namo	locá Martino da Cilva Júnior

## Compiler 2

Name	José Martins da Silva Júnior
Institution/agency	Núcleo de Gestão Integrada de Noronha - ICMBio
Postal address	Avenida Eurico Cavalcante de Albuquerque, nº 174, Bairro do Boldró. CEP: 53.990-000. Fernando Noronha/PE
E-mail	jose-martins.silva-junior@icmbio.gov.br
Phone	0055 81 3619-1150

#### 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)	Fernando de Noronha Archipelago
Unofficial name (optional)	APA Fernando de Noronha, Rocas, São Pedro and São Paulo / PARNA Marinho Fernando de Noronha

## 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 limits chosen for this Ramsar Site is the land of the Fernando de Noronha Archipelago, comprising the Territorial Local Authority State District of Fernando de Noronha, and the marine part surrounding this to a depth of six meters in low tide situation. This area is within the National Marine Park of Fernando de Noronha and Environmental Protection Area Fernando de Noronha, Rocas, São Pedro e São Paulo.

#### 2.2.2 - General location

a) In which large administrative region does the site lie?	Pernambuco
b) What is the nearest town or population centre?	Vila dos Remédios (within the Site); Natal, Rio Grande do Norte (360 km)

#### 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): 10929.2

Area, in hectares (ha) as calculated from 10927.41 GIS boundaries

## 2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Other scheme (provide name below)	South Atlantic Ocean, oceanic islands

## 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

Other reasons

The site has the only oceanic mangrove of the South Atlantic Ocean. It is the only island in the Atlantic that has a mangrove with special features. The vegetation extends over 15,000 m2 or 1.5 ha, and is considered one of the smaller mangroves in Brazil. The size of the trees also draws attention, since they reach up to 10 meters high, while in other places the average height is around 6 meters. Another peculiarity is to be composed of a single species Laguncularia racemosa, known as the white mangrove. In reality, what the island has is a mangrove forest, since it is composed of only one type of tree. The white mangrove in Noronha has the same characteristic as the red mangrove from other mangroves with aerial roots that help the fixation and balancing of the plant, and this adjustment should be related to the characteristics of the water and soil of Noronha.

☑ Criterion 2 : Rare species and threatened ecological communities

☑ Criterion 3 : Biological diversity

Due to its oceanic nature, the archipelago of Fernando de Noronha is a refuge for a considerable number of endemic species in Brazil, because it has been isolated from other biomes for millennia. It presents a high local abundance and important ecological functions, especially in relation to plants and terrestrial organisms and is therefore of paramount importance to the preservation of its natural resources.

The Archipelago of Fernando de Noronha was considered an area of extreme biological importance for the conservation of coastal and marine birds in a study conducted in 2002 by the Ministry of the Environment (MMA/SBF, 2002). These areas have high productivity and biological diversity, and are of extreme importance for the maintenance of local communities.

Of the species with ecological interest, one terrestrial invertebrate species that deserves special attention is the crab Gecarcinus lagostoma, endemic of the Brazilian oceanic islands (Fernando de Noronha, Rocas Atoll and Trindade). This species can also have a high commercial value because of its meat, which is well appreciated by islanders and visitors (MMA/IBAMA, 2005).

Regarding birds, besides the two endemic species mentioned in the previous section, the site also holds another endemic species: Zenaida auriculata Noronha.

Justification

The endemic species of corals present in Fernando de Noronha include: Astrangia braziliensis, Favia gravida, Mussismili aharti, Mussismilia hispida, and Siderastrea stellata.

Molluscs comprise the most studied group of benthic invertebrates in Fernando de Noronha, although many studies are still required in areas with sandy bottoms. It is possible to name at least 32 species of molluscs that occur in Fernando de Noronha that are considered rare or uncommon (this list can be found in the following section). It should be noted that many species (about ten) have not yet been identified to the specific level and were not mentioned in this list, but are probably endemic or rare also.

The Gastropods Colisella noronhensis and Fissurella emmanuelae are the only species of molluscs confirmed as endemic to the archipelago of Fernando de Noronha, being very common on the island. Other species may also be considered as exclusive of Brazilian oceanic islands: Malea noronhensis (endemic to the Brazilian oceanic islands), Thais nodosa meretricula (Ascension Island and Fernando de Noronha), Nassarius capillaris (Atol das Rocas and Fernando de Noronha) and Arene venusta (Atol das Rocas and Fernando de Noronha).

The vast majority of Demonspongiae species occurring in Fernando de Noronha is widely distributed in the Northern Caribeana Province, except Xestospongia grayi (=Prianusgrayi Hetchel 1983) that, so far, seems to be confirmed as the only endemic species to the island.

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

In relation to its fish populations, it was believed for a long time that there was similarity between Brazil and the Caribbean populations. However, despite having similar species, many Brazilian species have been identified as endemic to the southwestern Atlantic. In this context, the archipelago of Fernando de Noronha serves as a refuge for a considerable number of endemic species in Brazil, which have high local abundance and important functions. In the archipelago of Fernando de Noronha, 79 species of reef fishes were recorded, belonging to 31 families (Floeter et al., 2001).

Justification

The Pomacentridae family has five endemic Brazilian species, of which Stegastes rocacensis is considered endemic. It was reported that this species and Thalassoma noronhanum both endemic to the archipelago of Fernando de Noronha and Atol das Rocas, represent 42.84% of the total number of reef fish observed. Another endemic species of fish is Elacatinus randalli.

## ☑ Criterion 8 : Fish spawning grounds, etc.

The side of the "Mar de Dentro" ("Inner Sea") is used as an area for resting, reproduction, parental care Justification and refuge from sharks during 90% of the days in the year. The side of "Mar de Fora" ("Outer Sea") of the Archipelago is used as a feeding area every day of the year (MMA/IBAMA, 2005).

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

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4 Red List	CITES Appendix I	Other status	Justification
Combretum rupicola							

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Common name	Species qualifies under criterion	Species contributes under criterion 3 5 7 8	Period of pop. Est	% occurrence 1)	IUCN Red A List	CITES Appendix	CMS Appendix I	Other Status	Justification
Birds											
CHORDATA/ AVES	Elaenia spectabilis	Large Elaenia (Elaenia spectabilis ridleyana)	Ø000				LC • is • is			Considered "vulnerable" in the Brazilian list of endangered species (MMA/IBAMA, 2005)	Endemic
CHORDATA/ AVES	Limnodromus griseus	Short-billed Dowitcher	<b>2</b> 000	0000			LC ●数 ●解			Considered "endangered" in the Brazilian list of endangered species (MMA/IBAWA, 2005)	
CHORDATA/ AVES	Vireo gracilirostris	Noronha Vireo	<b>2</b> 000				NT ●舒 ●際			Considered "vulnerable" in the Brazilian list of endangered species (MMA/IBAWA, 2005)	Endemic
CHORDATA/ AVES	Zenaida auriculata noronha		0000								Endemic
Fish, Mollusc a	nd Crustacea										
ARTHROPODA/ MALACOSTRACA	Johngarthia lagostoma	(Gecarcinus lagostoma)		<b>2</b> 000							Endemic to the Brazilian oceanic islands
CHORDATA/ ELASMOBRANCH	Rhincodon typus	Whale shark					VU ●\$: ◎™				
Others											
CHORDATA/ REPTILIA	Caretta caretta	Loggerhead sea turtle					VU ●\$: ●\$#	✓	✓		
CHORDATA/ REPTILIA	Chelonia mydas	Green sea turtle					EN Sign	1	<b>✓</b>		Reproduction site.
CHORDATA/ REPTILIA	Dermochelys coriacea	Leatherback sea turtle	<b>2</b> 000				VU ●\$: ●₩	<b>✓</b>	V		
CHORDATA/ REPTILIA	Eretmochelys imbricata	Hawksbill sea turtle					CR ●数 ●際	<b>✓</b>	<b>✓</b>		
CNIDARIA/ ANTHOZOA	Favia gravida										Endemic
CHORDATA/ REPTILIA	Lepidochelys olivacea	Olive ridley sea turtle	<b>2</b> 000				VU ●数 ●際	<b></b>	<b></b>		
CHORDATA/ MAMMALIA	Megaptera novaeangliae	Humpback Whale					LC © SSS © SSSS	V	<b>✓</b>		Reproduction and feeding ground
CNIDARIA/ ANTHOZOA	Mussismilia harttii										Endemic
CNIDARIA/ ANTHOZOA	Mussismilia hispida			<b>2</b> 000							Endemic
CHORDATA/ MAMMALIA	Stenella longirostris	Spinner Dolphin									Only island in the South Atlantic ocean for social interaction (copulation and nursing).

i) Percentage of the total brogeographic population at the sit
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Find and a second of a real Astronomic brandlines in Cide reature at all the	
Endemic species of coral: Astrangia braziliensis, Siderastrea stellata.	
3	

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

<no data available>

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

## 4.1 - Ecological character

Fernando de Noronha has a submarine volcanic structure, which is a physical barrier on the ocean floor for the passage of deep, nutrient-rich currents, which end up rising to the surface. Thus, organic productivity and the amount of fish are higher. The marine ecosystem is more stable than the terrestrial one, when comparing the biological evolution of both natural environments, although variations occur and increases in species richness and density of its flora and fauna.

The small size of the island's ecosystem provides a rare visibility of the nature's reaction to changes or interventions promoted on their environmental stability and like any other ecosystem boundary, the preservation of the marine ecosystem is directly related to the preservation of the terrestrial ecosystem.

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

Marine or coastal wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
A: Permanent shallow marine waters		2		Representative
B: Marine subtidal aquatic beds (Underwater vegetation)		2		Representative
C: Coral reefs		2		Representative
D: Rocky marine shores		4		Representative
E: Sand, shingle or pebble shores		1		Representative
F: Estuarine waters		4		

## 4.3 - Biological components

#### 4.3.1 - Plant species

Optional text box to provide further information

Please refer to the Section 6.1.2. Additional reports and documents.

#### 4.3.2 - Animal species

Optional text box to provide further information

Please refer to the Section 6.1.2. Additional reports and documents, for the full list of species.

## 4.4 - Physical components

#### 4.4.1 - Climate

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

#### 4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)	
meues)	

and the state of t	
a) ivaximum elevation above sea level (in	004
a) Maximum elevation above sea level (in metres)	321
metres)	-

ın s)	321
	Entire river basin
	Upper part of river basin $\square$
	Middle part of river basin $\Box$
	Lower part of river basin $\square$
	More than one river basin $\Box$
	Not in river basin

Coastal 🗹

#### 4.4.3 - Soil

RIS for Site no. 2333, Fernando de Noronha Archipelago, Br	azil
Mineral	
Organic	
No available information	✓
Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)?	Yes O No   ●
4.4.4 - Water regime	
Water permanence	
Presence? Usually seasonal,	
ephemeral or intermittent water present	
Source of water that maintains character of the site	
Presence? Predominant water source  Water inputs from rainfall	
water inputs iron rainiair	
Water destination	
Presence?  Marine	
To downstream catchment	
Stability of water regime	
Presence?	
Water levels fluctuating (including tidal)	
,	
4.4.5 - Sediment regime	
Significant erosion of sediments occurs on the site	
Significant accretion or deposition of sediments occurs on the site	
Significant transportation of sediments occurs on or through the site	
Sediment regime is highly variable, either seasonally or inter-annually	
Sediment regime unknown	✓
4.4.6 - Water pH	
Acid (pH<5.5)	
Circumneutral (pH: 5.5-7.4)	
Alkaline (pH>7.4)	
Unknown	$ \overline{\mathscr{C}} $
4.4.7. Water calinity	
4.4.7 - Water salinity	
Fresh (<0.5 g/l)	_
Mixohaline (brackish)/Mixosaline (0.5-30 g/l)	_
Euhaline/Eusaline (30-40 g/l)	_
Hyperhaline/Hypersaline (>40 g/l)	_
Unknown	
4.4.8 - Dissolved or suspended nutrients in water	
Eutrophic	
Mesotrophic	
Oligotrophic	
Dystrophic	
Unknown	✓
4.4.9 - Features of the surrounding area which may affect the	ne Site
Please describe whether, and if so how, the landscape and ecological	
characteristics in the area surrounding the Ramsar Site differ from the site itself:	i) broadly similar ○ ii) significantly different
Surrounding area has greater urbanisation or development	

Surrounding area has higher human population density  Surrounding area has more intensive agricultural use  Surrounding area has significantly different land cover or habitat types	
4.5 - Ecosystem services	
4.5.1 - Ecosystem services/benefits	
Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site?	own 🎯
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 use that maintain the ecological character of the wetland	
ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland	
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	
<no available="" data=""></no>	

RIS for Site no. 2333, Fernando de Noronha Archipelago, Brazil

# 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

			ers	

Category	Within the Ramsar Site	In the surrounding area
National/Federal		
government	1 No.	

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

The entire archipelago of Fernando de Noronha belongs to the Federal Government. The Ramsar site corresponds to the National Park Fernando de Noronha, managed by the Union through ICMBio. It corresponds to a part of the main island. The other part is another conservation unit that doesn't have wetlands. There is no private property in FN, occupations for housing and commerce are by means of concession.

5.1.2 - Management auth	horitv	1
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agency or organization responsible for	Chico Mendes Institute for Biodiversity Conservation
managing the site:	
Provide the name and title of the person or	
people with responsibility for the wetland:	Feline Mendonca – Manager
people marroopenelently is all the addition	
Postal address:	Av Alameda do Boldro s/n Fernando de Noronha – PE- 53990-000Brazil
E-mail address:	felipe.mendonca@icmbio.gov.br

Within the site

 $\checkmark$ 

In the surrounding area

## 5.2 - Ecological character threats and responses (Management)

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

**Actual threat** 

High impact

Human settlements (non agricultural)

Factors adversely

affecting site

Livestock farming and

ranching

	ors adversely ecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Agriculture	and aquaculture				
Housing	and urban areas	unknown impact		<b>∞</b>	

**Potential threat** 

Transportation and service corridors					
Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area	
Roads and railroads	High 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		✓	✓	

#### Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Recreational and tourism activities	High impact		<b>✓</b>	

## Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Invasive non-native/ alien	High impact		<b>2</b>	

#### Climate change and severe weather

	Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
	Habitat shifting and alteration	High impact			<b>✓</b>

Global legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
UNESCO Biosphere Reserve	Brazilian Atlantic Islands: Fernando de Noronha and Atol das Rocas Reserves	http://whc.unesco.org/en/list/10 00/	whole

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National Marine Park	Fernando de Noronha	http://www.icmbio.gov.br/portal/ unidadesdeconservacao/biomas-bra sileiros/marinho/unidades-de-con servacao-marinho/2265-parna-mari nho-de-fernando-de-noronha	whole

#### 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
Natural Monument: protected area managed mainly for conservation of specific natural features
Habitat/Species Management Area: protected area managed mainly for conservation through management intervention
Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation
Managed Resource Protected Area: protected area managed mainly –

for the sustainable use of natural ecosystems

## 5.2.4 - Key conservation measures

## Logal protection

Legal protection		
Measures	Status	
Legal protection	Implemented	

#### Habitat

Measures	Status
Re-vegetation	Proposed
Hydrology management/restoration	Proposed

Species

Measures	Status
Control of invasive alien animals	Proposed

#### **Human Activities**

Measures	Status	
Regulation/management of wastes	Proposed	
Research	Proposed	

## Other:

-Hire team of experts for the preparation of a booklet containing the environmental legislation applicable to the APA, to be distributed to the local population and used as a working tool for managers and other institutions of the APA.

- -Study guidelines for the adequacy of the road system, integrated with solutions that protect the landscape and other protected areas. The development of these guidelines should take into account the sanitary sewer system designed and installed, once this has the greatest impact on the overall urban design. Likewise, the drainage system must be integrated into the system.
- Conduct inventories and surveys on the terrestrial invertebrate fauna of the APA, with identification of endemic, rare, threatened and bioindicators; prepare and train a local team to monitor the terrestrial invertebrate fauna of the APA; disseminate the results among local community and tourists, through flyers, posters, CD-ROM and other media, lectures and documentaries.
- -Take measures to prevent the capture of seabirds in fishing vessels, such as implementation of Tori line, differentiated regime of the weight in the lines and nocturnal departure.
- Disclose to cattle raisers, the need to adopt management techniques that will minimize impact

#### 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

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 opprocesses with another Contracting Party?

URL of site-related webpage (if relevant):

 $\verb|http://www.icmbio.gov.br/portal/images/stories/plano-de-manejo/plano_de\_manejo\_parna\_ferando-de-noro nha.pdf|$ 

#### 5.2.6 - Planning for restoration

Is there a site-specific restoration plan? Please select a value

## 5.2.7 - Monitoring implemented or proposed

- Monitoring of degraded coastal regions: develop a diagnostic of degraded coastal regions, especially between the Santo Antonio Bay and the Cachorro beach; develop studies to define benthic bio-indicator species; develop a monitoring strategy, using selected bio-indicator species; continuously monitor the marine and coastal environments, taking into account the pollution from garbage, effluent discharge, the divers behavior, boat traffic, among others.

## 6 - Additional material

## 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

Please refer to the Section 6.1.2. Additional reports and documents.

## 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 available>

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

<1 file(s) uploaded>

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:



ICMBio ( ICMBio, 2017 )



ICMBio (ICMBio, 2017)



ICMBio ( ICMBio, 2017 )



Raphael Dias ( IOMBio, 2017 )

## 6.1.4 - Designation letter and related data

## Designation letter

<1 file(s) uploaded>

Date of Designation 2018-01-25