

# TOURISTS' PERCEPTIONS WHEN VISITING FERNANDO DE NORONHA (PE): TAMAR PROJECT CASE STUDY

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#### **ABSTRACT**

In 1984 the TAMAR Project created a base in Fernando de Noronha, an archipelago with a great flow of tourists, where activities such as environment preservation, scientific research and environmental education have been carried out, mainly aiming at the preservation of the sea turtles species existing in Brazil. At the TAMAR Project Visitor's Center in Fernando de Noronha there is a book where visitors can log their suggestions, complaints or give their opinion on general aspects of the island. The objective of this study was to verify the perceptions of these visitors and provide information about what can be improved in the archipelago, also to classify the comments so that they are directed to the institutions that are in charge of the relevant issues. The data was collected through the survey of 96 comments registered in the Suggestions/Complaints Book in 2016. The results revealed that aspects related to the infrastructure, services and sustainable tourism can be improved.

Keywords: TAMAR Project; Fernando de Noronha; Ecotourism.





# 1 INTRODUÇÃO

### Fernando de Noronha

Fernando de Noronha Archipelago is located in the Atlantic Ocean and was discovered in 1501 by the Portuguese Fernão de Loronha while accomplishing an expedition that left Lisbon to arrive in the Vera Cruz land (one of the first names given to Brazil soon after its discovery by Pedro Álvarez Cabral in 1500). With 26km2, the island is located 545 km from Pernambuco and 379km from Rio Grande do Norte (MARSHALL, JENKINS, CLEARY, 2009). Over the years, the archipelago has been used for many different purposes. It was a common prison from 1830 to 1910, then it was turned into a political prison in 1938 and in 1942 the Decree n<sup>o</sup> 4.102 of 9th February 1942 converted it into a military base due to its strategic location in the Atlantic Ocean (PESSOA, 2014).

The first Conservation Unit (CU) was implanted in Fernando de Noronha in 1986, the Environmental Protection Area (EPA), which was created by the Decree n<sup>o</sup> 92.755 of 05th June 1986, comprising an area of 884,1600 hectares. Two years later, another CU was created in Fernando de Noronha, the National Sea Park of Fernando de Noronha (PARNAMAR), by the Decree n<sup>o</sup> 96.693 of 14th September 1988, which included an area of 10.927,64 hectares. The institution in charge of the environmental management of all CUs created by the Federal government in Brazil is the Institute Chico Mendes of Biodiversity (ICMBio), whose role is to propose, implement, manage, protect, inspect and monitor these areas (ICMBIO, 2017).

In 2001, Fernando de Noronha was declared a World Heritage for education, science and culture (UNESCO) by the United Nations due to the relevance of the archipelago to the feeding and reproduction of tuna, sharks, sea turtles and water mammals as well as for being one of the largest concentrations of tropical sea birds in the Western Atlantic (UNESCO, 2009). A study is being developed with the purpose of nominating Fernando de Noronha to be awarded the title Geopark by UNESCO (MOREIRA, 2015).



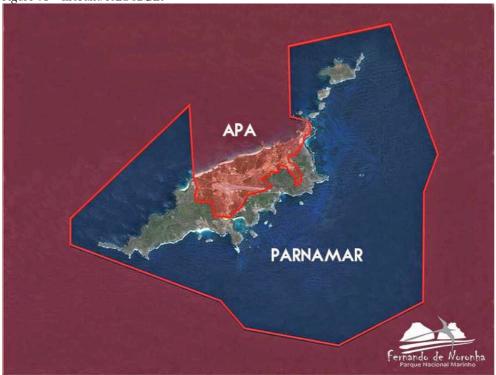
A CU is an area where, through previous studies, new ways of use aiming at the environment preservation and/or conservation are implemented. In Brazil, these areas can be municipal, state or federal. They can be classified into two categories depending on the type of use they are destined for: Full Protection Conservation Units or Sustainable Use Conservation Units. In the first categories are the CUs that cannot be populated by humans, and they are used indirectly with scientific research and tourism activities. In the Sustainable Use UCs, however, households can be kept aiming to reach a balance between nature conservation and their sustainability in using natural resources (WWF, 2017; Brasil, 2000).

Sustainable Use CUs can be: Environmental Protection Areas, Ecological Interest Relevant Areas, National Forests, Extraction Reserves, Fauna Reserves, Sustainable Development Reserves and Natural Heritage Private Reserves. While the full protection CUs are: Ecological Stations, Biological Reserves, National Parks, Natural Monuments and Wildlife Refuges.

Therefore, in Fernando de Noronha there is a full use CU, the PARNAMAR, and a sustainable use CU, the EPA (Figure 01). It seems relevant to emphasize this characteristic, since being a consolidated tourism destination that received 91,000 visitors in 2016 alone (RAMOS, 2017), it should reach a balance between the tourist flow and the environmental conservation.



Figure 01 - EPA and PARNAMAR



Source: www.rotanoronha.com.br

Therefore, in EPA some features are found which are not found in PARNAMAR, such as accommodation and food services, health unit, access with paved road, regulated fishing, sanitation, airport, automotive vehicles, among others. On the other hand, in PARNAMAR in Fernando de Noronha there is a planned schedule for visits, areas where visitors can only go if accompanied by a certified tour guide, and visits to some other natural areas have to be booked so that the number of visitors is not larger than the number allowed for each visit, among others.

A brief analysis of the two CUs in Fernando de Noronha and the governmental and non-governmental agencies that act in them will be presented below.

# Fernando de Noronha Environmental Protection Area

The EPA in Fernando de Noronha is where the group of households are located, along with services such as accommodation, restaurants and other general activities that enable the tourism in the archipelago.





According to the EPA Management Plan in Fernando de Noronha, its aim is to achieve in the long term, the conciliation of environmental conservation and other human activities developed locally, improving the quality of life of the residents. Its action programs include urban and housing aspects, infrastructure, sanitation, regulation of the fishing activity, support to the agriculture and cattle raising activities, recovery of degraded areas, insertion of the local youngsters, among others (ICMBIO, 2005).

# **Environmental Conservation Fee**

With the purpose of managing the potential impact to the environment that tourism might bring to the archipelago, a migration control is carried out, which determines how many tourists can enter the reserve each day, and the tourists that remain on the island have to pay an environmental conservation fee (ECF). The ECF is proposed by the Pernambuco government, as an instrument and alternative found to guarantee the ecological preservation of Fernando de Noronha (ICMBIO, 2005).

The ECF value is calculated according to the number of days the tourist remains on the island, and it costs R\$ 68.74 a day. These values are fully destined to the Pernambuco government, pursuant to the Law n° 11.704, of 29th November 1999. It seems relevant to mention that the ECF value is not included in the holiday packages that the agencies usually sell, making the tourist have an extra expense before entering the island (ICMBIO, 2005).

# National Sea Park in Fernando de Noronha

The PARNAMAR in Fernando de Noronha covers the greatest part of the archipelago, except for the areas of Vila dos Remédios, Vila do Boldró, Vila Três Paus, air force residence, military village, mountains do Meio and Pico and a narrow strip of beach from the Praia da Cacimba to the Port of Santo Antonio. In addition to the main island, which is the only one inhabited, Fernando de Noronha has other islands around it, which are also part of PARNAMAR, such as the islands Rasa, Rata, do Frade, do Meio and Sela Gineta.

Some park areas such as the Baía do Sueste, Baia dos Golfinhos, Praia do Leão and Praia do Sancho have a fixed schedule for visitation, which is from 9h00 to 16h00. And in order to





enjoy the natural beauties of PARNAMAR, it is necessary to buy a ticket, which according to the Environment Ministry Ordinance n<sup>o</sup> 135/2010, is valid for 10 days in a row, and costs R\$ 99,00 for Brazilians and R\$ 198,00 for foreigners. That is, in addition to the ECF, the visitor also has to pay for a ticket to enter the park (PARQUE NACIONAL MARINHO FERNANDO DE NORONHA, 2017).

The ticket purchase verification is carried out at information and control Points (ICP), located in the places that give access to some of the attractions in the park. In the ICPs, visitors can buy souvenirs, food, get information, etc. It seems important to mention that the management of this support infrastructure in PARNAMAR is carried out by Econoronha, which won a public bid process to render support services to tourist visitation. By selling tickets, improving the access to the beaches and supplying food services, the concession to Econoronha seeks to achieve sustainability and the correct management of ecotourism inside the park (PARQUE NACIONAL MARINHO FERNANDO DE NORONHA, 2017).



Source: the authors (2018).

Figure 02 shows a snack bar in one of the Econoronha ICPs which is located at the entrance of the Praia do Sancho (Sancho Beach). Figure 03 shows the suspended trail installed by Econoronha, giving access to the attractions of this area. The booking of visits to some trails and guided tours inside PARNAMAR is only possible in certain points where tickets are sold.





# 2 TAMAR PROJECT

This Project started at the end of the 1970s, when a group of students from the Oceanography course in the Federal University of Rio Grande do Norte started to survey data related to the existence of five species of sea turtles that occurred in Brazil. After this data survey which comprised the whole coast of Brazil, the first three bases of the TAMAR Project were founded in 1982. These were located in Pirambu/SE, Comboios/ES and Praia do Forte/BA (PROJETO TAMAR, 2011).

The fourth base of the TAMAR Project to be created was that in Fernando de Noronha, in 1984. On that base, the Ecotourism Program has been developed enabling tourists to take part in environmental education activities, such as the intentional capture of sea turtles, tartarugada (a special visit that allows the tourists to see the turtles spawning on the Praia do Leão (Lion Beach), guided visits to the Sea Turtle open museum and Cycle of Lectures about the environment (GERHARDT, 2015). The first two environmental education activities are carried out on the beach and the other two in the TAMAR Project Visitor's Center in Fernando de Noronha.

The cycle of lectures about the environment, which is offered daily at the Visitor's Center, has been held for 20 years and presents themes about the local fauna, the two CUs, ecotourism, and a special program on Sundays in which the researchers who visit the island are invited to present their works (MOREIRA; ROBLES; BELINI, 2009). At the auditorium of the TAMAR Project Visitor's Center there is a book for suggestions/complaints which provided the data for this study. In that book, the tourists that attend the cycle of lectures can leave comments about what can be improved on the island.

Nowadays, the Project has 25 bases all over the country, focusing their work on social inclusion, scientific research and environmental education, seeking to raise people's awareness of the importance of preserving the environment and protecting the different species of sea turtles found on the Brazilian Coast.





Figure 04 – Book for suggestions/complaints inside the auditorium of the Visitor's center



Source: Personal collection.

Figure 04 shows the Book for suggestions/complaints located inside the TAMAR Project Auditorium. Every evening, before the lecture starts, the interns or the staff of the TAMAR project introduce the activities. In this introduction, the book is mentioned and the visitors are invited to leave their comments after the lecture.

# 3 METHODOLOGY AND RESULTS

This was a bibliographic study based on document, which was the analysis of the data collected through the TAMAR Project Book for suggestions/complaints in Fernando de Noronha. Ninety-six comments were written in this book in 2016. These comments were analyzed aiming at understanding the visitors 'perception when visiting the archipelago. The book works as a free space for whoever wants to make comments and has been used since 2008.

The comments were classified with the purpose of understanding which institutions they should be directed to, in an attempt to create a tool to help determine how the quality of the tourists experience and the life of the locals can be improved, and also to help achieve the concept of a sustainable tourism product on the island.



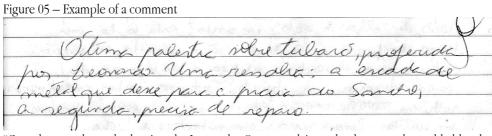


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Due to the complexity of classifying suggestions and complaints, they were analyzed by identifying specific sentences and directed to the respective relevant institution, or so that they could be linked to the competences of each institution. Comments that were not specific or that could not be linked to the relevant institutions were not used.

Therefore, the comments were classified into categories as follows: Administration, ICMBio, Pernambuco Electrical Power Company (CELPE), Projeto Golfinho Rotador (Rotator Dolphin Project), private companies and TAMAR Project. Emphasis was given to positive or negative comments.

Each of the suggestions or complaints written in the book might have more than one remark, that is, when there were several suggestions in the same comment they were individualized in the graph.



"Great lecture about sharks given by Leonardo. One complaint only, the second metal ladder that leads to Praia do Sancho needs repairing."

Source: Book for Suggestions/Complaints of the TAMAR Project in Fernando de Noronha.

Figure 05 shows one example of comment written in January 2016, despite being a comment, two remarks were found. One of them is about the Cycle of Environmental Lectures carried out daily in the TAMAR Project Visitor's Center, and the other is about the infrastructure in Praia do Sancho (Sancho Beach) inside PARNAMAR. Both remarks found in the same comment were individualized and presented separately in the results. The institutions involved are the TAMAR Project, which is in charge of the Cycle of Environmental Lectures and ICMBio, which is responsible for the PARNAMAR management.

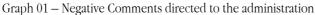


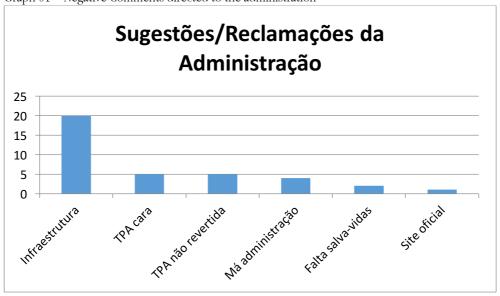
# 4 RESULTS

Next, the results of comments written in the Book for Suggestions/Complaints of the TAMAR Project are presented as well as the institutions they were directed to.

# Administration

Twenty-four comments were directed to the administration, all negative.

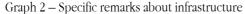


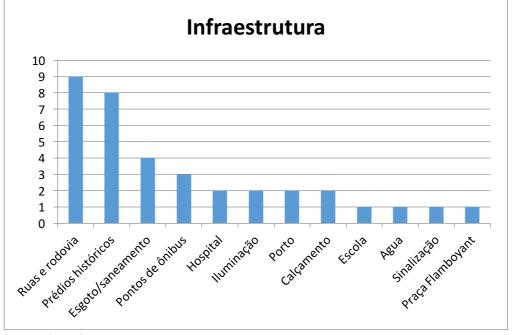


Source: the authors (2018).

Graph 01 shows that out of the twenty-four comments, twenty pointed out that the island needs to improve its infrastructure. Four visitors considered that the island has bad administration and two complained about lack of life guards on the beaches. Five of the comments mentioned that the Environmental Conservation Fee (ECF) charged when the visitors enter the island is too expensive, and five thought that that fee is not used properly to the island's benefit. One comment was about lack of information on the Fernando de Noronha Official Webpage.







Source: the authors (2018).

Graph 02 shows that out of the twenty comments related to the island infrastructure, nine remarks were about streets and roads, eight regarded the historical buildings as badly conserved, four were about sanitation and the sewage system, three mentioned the bus stops, two referred to the hospital, two to the port, two complained about the pavement, one was about the school, another about water, one involved street signs and another complained that the Flamboyant Square was run down.

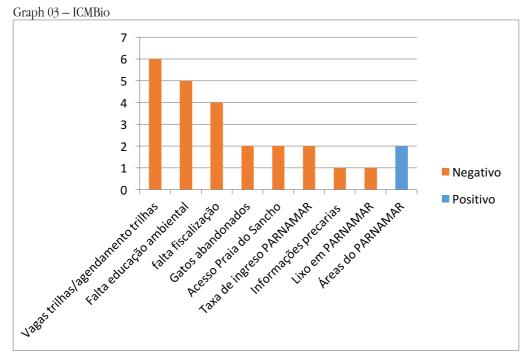
# Instituto Chico Mendes da Biodiversidade – ICMBio (Chico Mendes Institute of Biodiversity)

Twenty-three comments were directed to the ICMBio, from which 21 were negative while two were positive.





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Source: the authors (2018).

Graph 03 shows that the need to improve the booking system for the trails was mentioned six times, when tourists tried to book it, many times there were no vacancies. This information is important, since each area in PARNAMAR has its own characteristics that might limit the number of visitors in each visit. Lack of environmental education is mentioned in five different comments, among them, the visitors mentioned that the place lacks information leaflets, general environmental awareness and instructions to the tourists about how to behave on the island. Lack of inspections was also mentioned four times. The visitors mentioned having observed cats abandoned on the island in two comments. The access to Praia do Sancho (Sancho Beach), in the PARNAMAR area, was mentioned twice and improvements were asked. One of the tourists described as precarious the information received at the tickets selling point. Another tourist mentioned that he found rubbish inside the PARNAMAR area. On the positive side, two tourists said they liked PARNAMAR and had no complaints.

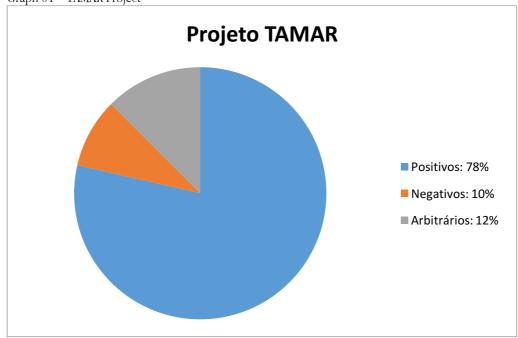
It seems relevant to observe that some of these comments refer directly to the Concessionary Econoronha and not only to the ICMBio. And others should be more specific, so that ICMBio could understand exactly which problem is being pointed out.



# **TAMAR Project**

Fifty-three comments were directed to the TAMAR Project, among these forty-four were positive and seven negative, while seven were considered arbitrary. They were considered arbitrary for not following rules or norms, that is, they are proposals of new themes for the lectures and regard the audience, who according to the visitors, should take part in them.

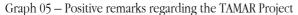


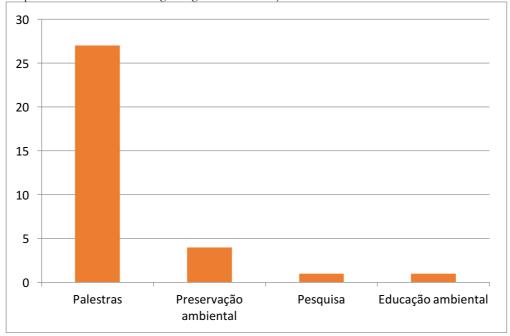


Source: the authors (2018).

Graph 04 shows that out of the 53 comments directed to the TAMAR Project, 78% were positive, 10% were negative and 12% were arbitrary.





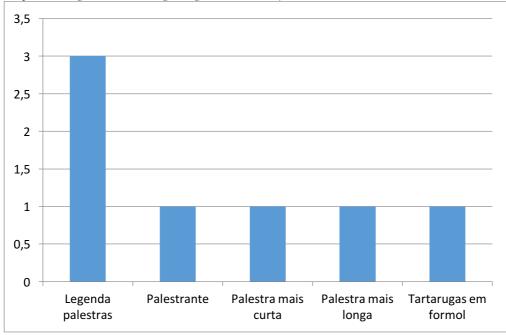


Source: the authors (2018).

Graph 05 presents the positive remarks directed specifically to the TAMAR Project. Twenty-seven comments congratulated or made positive remarks about the Cycle of Environment Lectures. Four positive comments were about the environmental conservation work organized by the TAMAR Project. There was also a positive comment about the research work developed and another about environmental education.







Source: the authors (2018).

Graph 06 shows that out of the seven negative comments directed to the TAMAR Project, three were about lack of subtitles in different languages to the lectures shown on video. This fact hampered the foreigners' understanding of the environmental themes exposed in videos. One negative comment was directed to one of the lecturers, another mentioned that the lecture should be shorter, while another visitor considered that it should be longer. Finally, another negative comment was about the exhibition of dead sea turtles in formaldehyde flasks in the Visitor's Center.

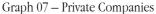
The comments considered arbitrary were three: One of them made suggestions of themes for the lectures, and in two comments, the tourists expressed their belief that the lectures should be compulsory to all tourists visiting the island.

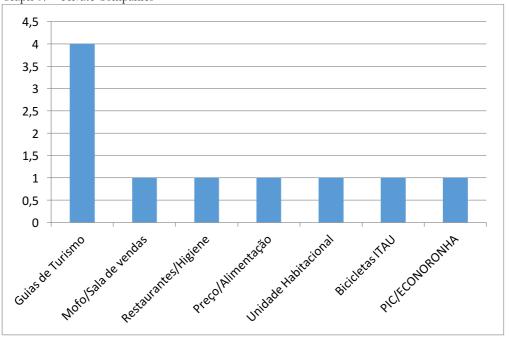
# **Private Companies**

Eight negative comments were directed to private companies that operate in the archipelago.









Source: the authors (2018).

Graph 07 shows that out of the eight comments, four remarks were directed to the tour guides who had some kind of bad behavior. Such as poking animals during the guided diving activity or giving precarious information to the visitors. Other individual remarks mentioned that the souvenir shop had mould, lack of hygiene was observed in restaurants, the price of food was too high, one unit in the accommodation system was badly kept, some inns do not take care of the bicycles that the ITAU bank donated to the island for the tourists to use, and there was poor service in the Information and Control Point (ICP).

# CELPE and Projeto Golfinho Rotador (Rotator Dolphin Project)

CELPE received one negative comment asking to check the spelling of the English subtitles in the film shown in the CELPE interactive museum. And the Rotator Dolphin Project received one comment that suggested that the State should take over that Project.





# **5 FINAL CONSIDERATIONS**

The results obtained from the Book for Suggestions/Complaints of the Visitor's Center in the TAMAR Project pointed out that there are still aspects to be improved in the archipelago according to the tourists. Among the aspects to be improved and that were mentioned we found basic infrastructure, support infrastructure, services and the issue regarding the island's sustainability.

In such case, few positive comments were seen, since the data was collected through a medium that asks for suggestions/complaints. Therefore, it is important not to generalize and see these comments as tools for improvement. Likewise, since the institutions have different responsibilities and competences, the results should be analyzed individually for each of them.

The remarks directed to the administration showed recurrence of aspects related to the island infrastructure, and the improvement of aspects such as roads, historical buildings, bus stops and the hospital were common to them. Some comments were also in relation to the ECF, expressing that the value is high and apparently the resources have not been used to the island's benefit.

ICMBio received negative comments regarding the booking of guided visits, such as Atalaia, Pontinha — Pedra Alta, Abreus and São José, due to the limited number of visitors per visit. However, each of these places has its own load capacity that must be respected and results in the number of vacancies offered per day. On the other hand, since February 2017, booking of guided visits can be made via the Internet, using the PARNAMAR webpage up to five days before the visit, which makes it easier to access information and the program for the visits.

Another suggestion was to include interpretative material (signboards, leaflets, maps) as a way of providing environmental education and increase inspection. Most of the comments directed to the TAMAR Project were about the Cycle of Environmental Lectures, since the space where these lectures are given also shelters the Book for Suggestions/Complaints.





Being an activity of environmental education which is free for the visitors, it is accessible to all that want to take part and therefore, contributes to the environmental awareness of both the tourists and the local community, favoring the bases of ecotourism in the archipelago.

Companies that render services in the areas of food, accommodation, souvenirs and tour guides also received criticism in the category "private companies". The leaders in this category were the tour guides, who according to the tourists acted unprofessionally or presented behavior that somehow can affect the island sustainability.

To sum up, the Fernando de Noronha Archipelago is a consolidated ecotourism destination in Brazil with a complex environmental balance, where several agencies and institutions work together to attend the tourism demand and protect the environment including the local community in the process. Even so, there are still aspects to be improved and this work aimed at contributing towards these issues.

With the purpose of improving the negative aspects found in the archipelago that were pointed out by the tourists in this research, this is an attempt to suggest an action plan or a viable strategy. Since there are several institutions mentioned in the research results, we propose that some work is developed on an individual basis with those interested in knowing about the results found, exposing the positive and negative aspects found in the comments left by the visitors.

In this way, each institution can learn and evaluate the data directed to them and in the future seek alternatives to improve the visitation to Fernando de Noronha.





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