

## **FERNANDO DE NORONHA ARCHIPELAGO: Community perspectives on tourism**

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### Abstract

The Fernando de Noronha Archipelago is located in the Atlantic Ocean, about 500 kilometres off the Northeast coast of Brazil. The archipelago is a World Heritage site and is considered one of the main ecotourism destinations in Brazil. The aim of this paper is to present an assessment of Fernando de Noronha's community in regards to their perceptions of change and impacts on local culture due to tourism development. The study used surveys distributed to tourism businesses and employees, interviews with government staff, and participant observation. It was concluded that the constant growth of tourism in the archipelago is leading to serious social issues on the main island. On the other hand, significant improvements have been experienced in the standard of living of, and in services offered by the government to, the local community. It is necessary, therefore, to find ways to balance impacts and consequently reach an outcome that is positive to the local population and to the natural environment.

### Keywords

Fernando de Noronha Archipelago, tourism impacts, community

### Introduction

In contrast to many continental regions, islands typically have a distinct and immediately recognisable identity, which in turn tends to attract and create a positive image on tourists (Pearce, 2003). Moreover, warm tropical islands appeal to tourists worldwide as havens for escaping everyday life and have been populated in tourist imagery as paradise destinations (Gössling, 2003b). This is the case of Fernando de Noronha Archipelago, where the remoteness and biodiversity further strengthen their vocation for nature-based tourism.

The archipelago comprises 21 islands, islets and rocky outcrops covering an area of approximately 26 kilometres<sup>2</sup>. It is situated 360 kilometres off the northeastern coast of Brazil, at Latitude 3° 54' South and Longitude 32° 25' West (Figure 1). The climate is considered stable, with two main seasons: the wet season from March to May, and the dry season from August to January. The yearly average temperature on the island is of 26°C, with average maximum reaching 31°C and an average minimum of 18°C.

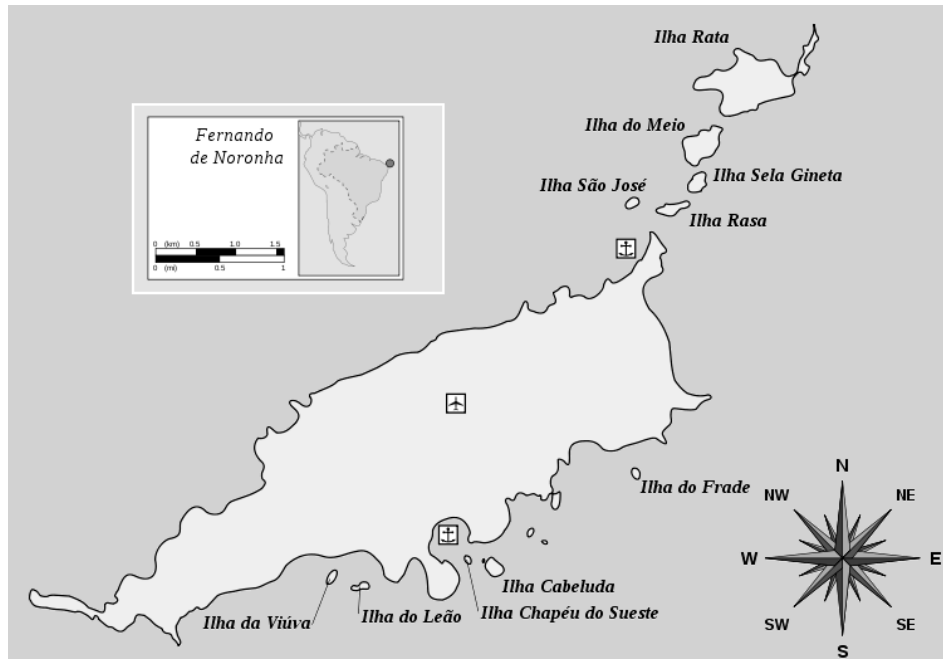


Figure 1. Map of Fernando de Noronha Archipelago (Adapted from Wikimedia Commons)

The archipelago is considered a prime nature-based tourism destination in Brazil, a UNESCO World Heritage Site since 2001 (Widmer, 2007), and is visited predominantly by domestic tourists all year long (Ministério do Turismo, 2006). Its main attractions are the natural scenery, ease of observation of several species of animals, including spinner dolphins, turtles and sharks, and also its suitability for the practice of snorkelling, surfing and free and scuba diving (Ministério do Turismo, 2006; ADEFN, 2004). Apart from tropical white sandy beaches, Fernando de Noronha also hosts historic and geological monuments that attract tourists from different parts of the world. The islands are the remains of a large volcanic edifice, with a base 4,000 meters deep, which serves as a barrier for nutrient-rich sea currents that are forced to rise and thus create an excellent environment for several species of plants and animals that are usually less common near the sea surface (Almeida, 2002; Teixeira et al., 2003). Also, the archipelago is considered one of the most important areas for breeding seabirds in the Atlantic Ocean and a nursery for many sea animals at risk, such as cetaceans and turtles (IBAMA, PNUD and Tetraplan, 2005).

The significant biodiversity of the archipelago led to the establishment of two Protected Areas in and around the islands: Fernando de Noronha Marine National Park and Fernando de Noronha/Rocas/São Pedro/São Paulo Environmental Protection Area. The National Park<sup>1</sup> was established in 1988 and covers approximately 70% of the main island and all other islets and rocky outcrops. The Environmental Protection Area was established in 1986 and covers the rest of the main island, including the populated area. With the establishment of these Protected Areas, more strict regulations for the use of natural resources around the archipelago were put into place and strict rules regarding visitation were implemented. There is a zoning plan for marine activities that includes, among other restrictions, some 'no access' areas, some tracks requiring the presence of authorised guides, and some areas having strict visitation hours.

The only inhabited island, also called Fernando de Noronha, has a population of approximately 3,500 people. Tourism has had notable positive and negative influences on the island population. The aim of this paper is to present a preliminary assessment of

Fernando de Noronha's community and some of their views in regards to change and impacts derived from tourism development. Such knowledge may help inform future tourism planning and management of the island, as the identification of problems, and also of best practices, may aid in the development of new strategies to overcome commonly encountered issues. For this study surveys were developed and distributed to tourism businesses and employees (n=300), interviews with government staff, and participant observation.

## Research on tourism and island communities

Tourism and island communities, as a topic of research, has been receiving significant attention from tourism scholars for the past three decades. According to Scheyvens and Momsen (2008), most of the focus of these studies has rested on issues of environmental sustainability and the often problematic over reliance on the tourism sector, particularly in small island states. Hayward (2007) points out that, in general, research on island cultures have not been sufficiently theorised and, adding to Scheyvens and Momsen's (2008) argument that most research in the island tourism field has relied on case-studies, it seems that although there are many studies available, there is still scope to further explore the issues involved with tourism in these communities. The present study is a preliminary assessment of an island community and their views on tourism development. Adopting case study and mainly quantitative methods, we aim to initiate a community-based research agenda to build understanding of tourism and relevant social and cultural aspects of living on an island that 'breathes' tourism all year long. In this paper we report the results of the survey employed in 2008. The paper will provide a Brazilian example of the complexities and different issues that affect small island communities when tourism becomes their primary economic activity.

The survey was distributed on the main island to tourism businesses and employees during weekdays between 9am and 7pm for two months in the summer season of 2008. Respondents included staff from businesses such as accommodation, transport, tour companies, food and beverage, as well as local crafts people, commercial fisherman, photographers, among others. A convenience sample was used, where the researcher visited tourism businesses on the island and approached staff who were available at the time. All accommodation providers and restaurants on the island were represented by at least one staff member in the sample. The 'clip-board' survey was filled out by the researcher and a total of 300 surveys were completed.

## Tourism and life in the Fernando de Noronha Archipelago

Before protected areas were established in the archipelago in the 1980s, community living was based around the ocean and the consumptive use of natural resources. Fishing, hunting and gathering were not only common practices but the main source of food and income for most islanders. Currently, tourism is the main economic activity (Mazaro, 2009) and, although the community is still highly dependent on the ocean and its resources, traditional activities such as fishing and hunting are either strictly regulated or completely forbidden.

Tourism in Fernando de Noronha began officially in 1974, when the National Air Force authorised regular commercial flights to and from the island. Between 1982 and 1987 tourists visiting the archipelago had only two options for lodging and there was only one weekly flight. Tourism was also considerably different at that time, as without the

Protected Areas there were no visitation rules and tourists could freely dive, snorkel, fish and swim at any beach, at any given time, without restrictions (Soares, 2005).

Regarding the scale of visitation, 10,094 tourists were recorded in 1992 (Silva-Jr., 2003). Ten years later, in 2002, this number increased by 520%, or 62,551 tourists/per year (Silva-Jr., 2003). This continuous and notable increase has impacted on the community and on the Archipelago, particularly as increased tourism numbers lead to an increase in the flow of people coming to take job positions created by tourism demand. The sharp population growth has already aggravated serious urban expansion problems that, according to Andrade, Gomes and Borges (2008: 1), may further lead to "the collapse of the terrestrial habitats [of different animals] and the extinction of some marine species".

Results from the surveys suggest that residents do not perceive impacts to be really considerable. Most respondents (82%) indicated that tourism does not harm the natural environment, with only 18% of respondents agreeing that negative impacts are generated by tourism. However, the local population acknowledges that tourism on the island is dependent on the natural environment. When asked what they believe to be the main attraction for tourists to the archipelago, most of the respondents indicated some sort of natural feature or nature-based activity (Table 1).

<b>Tourism Attractions</b>	<b>Cases</b>	<b>%</b>
Beaches	129	43
Natural Beauty	99	33.1
Water Sports	27	9.0
Biodiversity	23	7.7
Peace and Tranquility	8	2.6
Cultural Aspects	6	2
Protected Areas	4	1.3
Geodiversity	4	1.3
<b>Total</b>	<b>300</b>	<b>100</b>

Table 1. Main tourism attractions as noted by respondents

These results indicate that the community is aware that its main tourist attraction is the natural environment. However, it does not seem that there is a noteworthy awareness of the impacts that increased visitation has on the natural resources that tourism is so dependent upon. Previous research has demonstrated the dangers posed by tourism to island communities, not only to their marine life and natural resources but also to their general living, such as access to water and sewage (Apostolopoulos and Gayles, 2002; Gössling, 2003a). Therefore, in order to appropriately manage and mitigate the impacts caused by the increase in visitor numbers to the region, residents need to be made more aware of the need to continue conserving and preserving these natural resources.

It is significant to note therefore that the island's economic growth is directly related to tourism growth. Tourism has contributed to making Fernando de Noronha a district holding a gross domestic product (GDP) well above the national average (IBGE, 2008), with the services sector being the biggest income provider, supporting about 27% of the population working for the tourism industry. Results from our study also demonstrate that the wages and living conditions for many in the archipelago are much better than in other cities in the country. When asked if their income was better in Fernando de Noronha than what they earned when living on the mainland, 79% responded affirmatively<sup>2</sup>. However, a more detailed analysis of the responses on income distribution on the island identified a trend towards concentration of much of the income in the

hands of major business owners, a result corroborated by Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis, Programa das Nações Unidas para o Desenvolvimento and Tetraplan (IBAMA, PNUD and Tetraplan, 2005).

Quality of life was nonetheless considered a major draw card for island residents, with most respondents (66%) indicating that they have better quality of life in Fernando de Noronha. The sense of peacefulness found in remote islands, security and the natural landscape may be some of the factors that positively influenced this perception on residents. However, 34% of respondents indicated having a poor quality of life, which may be due to the poor living conditions experienced by some, including the high rental prices and scarce food supply. Due to the logistics involved in bringing goods from the mainland, food prices are much higher than what is commonly found in other Brazilian towns, particularly vegetables and fruits. In addition, there are not many entertainment options on the island and the rationing of water is a constant. In contrast, almost all respondents (95%) said they are satisfied with their current occupation, with all respondents being employed by the tourism and services industry. Machado, Campello and Valença (2004) had similar results, whereby 84% of their respondents indicated that they were satisfied or very satisfied with their current occupation.

In general, therefore, the results indicate that respondents perceive the liveability of Fernando de Noronha as favourable, particularly when their quality of life, including work life, is compared to mainland residents. The tourism industry plays a vital role in this environment, providing the context within which life is experienced on the island. It is important, however, to take note of the considerable number of residents unsatisfied with the quality of life on the island. As Falcão (2010) noted in her study of the life cycle of tourism in Fernando de Noronha, tourism and the consequent rapid increase of the population have already contributed to the development of several problems in the living conditions of part of the population, in areas such as housing and quality health services.

Another facet of the tourism industry and its role in community development and quality of life is that the industry is not only the main employer on the island, but it also attracts individuals from the mainland who initially come as visitors but subsequently stay, or try to, as permanent residents. However, population growth in Fernando de Noronha is somewhat controlled. The number of visitors is limited, and especially their long-term permanence. All visitors must pay an Environmental Preservation Tax. This charge, instituted by a State Law in 1989, was initiated when tourist numbers started to increase considerably on the island and is to ensure the preservation of the archipelago's environmental resources. The tax has been implemented to guarantee also the normal supply of goods to the local population, given the geographical and transport logistical limitations and restrictions faced in Fernando de Noronha. More importantly, the tax was established with the primary purpose of implementing mechanisms and procedures for controlling access and establishment of people within the district (Tisdell, 1998). Thus, those who do not have the 'permanent resident' card are either framed as 'exempt' (e.g., researchers, trainees from NGOs, relatives of islanders) or are visitors, and therefore pay the tax. As a visitor, the daily rate in 2011 was approximately US\$ 24. The longer the stay, the higher the rate, reaching almost US\$ 2,000 for 30 days.

The Environmental Protection Tax therefore serves several different purposes. First, and foremost, it is an environmental policy instrument that generates funds for environmental conservation. The tax also provides a framework for tourism planning and development as is an attempt to restrict tourist visitation to between five and 10 days. Less than five days visitation is neither encouraged nor penalised (the daily rate is the same), but tourists who want to stay more than 10 days receive a kind of progressive

penalty so that for each additional day the amount is increased exponentially. An additional benefit of the tax is that it raises funds for the general management of the island and therefore attends to general community welfare issues. The tax seems also to have served to curb a population explosion in Fernando de Noronha (Soares, 2005; Hercowitz and Ventosa, 2003).

According to official data from the Population Census 2010, the archipelago has 2,629 inhabitants (IBGE, 2010). Unofficial data indicates that the population exceeds 3,500 people currently living on the island. Despite all the efforts to control the entry of visitors and potential residents on the island, many people stay without consent, and many others stay as temporary residents, particularly individuals employed by the tourism industry.

In order to assess the perception of residents on the population growth experienced on the island, the survey asked participants if they thought there were too many people currently living in Fernando de Noronha. More than 75% of respondents believe that there are already too many people living on the island, with 24% saying 'No', and 0.6% declining to answer this question. Evidence of population growth can be easily seen on the island: constant water and electricity shortage is experienced particularly during the high season, the sewage system is currently overloaded and there is evidence of shortage of houses for rent or sale.

## Conclusions

This short paper presented a preliminary study with 300 local residents of Fernando de Noronha, the main island on the Fernando de Noronha Archipelago, to identify their general perceptions of tourism and life on the island. All participants were directly or indirectly employed by the tourism industry and therefore were well positioned to comment on the impacts of tourism on the island. Nonetheless, it is necessary to note that some of the respondents might hold a biased optimistic view of tourism, as they are directly or indirectly dependent on its success and development. This issue notwithstanding, this preliminary study provides a general overview of how the community see tourism and its impact on life on the island.

Both the population and the tourism industry have been growing constantly in the archipelago, a situation that is leading to some social issues on the main island. On the other hand, however, there is evidence of important improvements in the standard of living of, and in services offered by the government to, the local community. Therefore in order to appropriately manage and mitigate the impacts that are experienced by the people of the island, the tourism management strategies should focus on programs that ensure the impacts of a growing population does not diminish the tourism, liveability and natural assets of the island.

## Acknowledgements

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## Endnotes

1. National Parks receive one of the highest levels of legal protection among protected areas in Brazil. Environmental Protection Areas are less strict and allow for human occupation and sustainable use of resources.

2. Only 19.3% of respondents were born in Fernando de Noronha and the average length of permanent stay on the island was 16 years.

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