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Tourist attitudes towards natural reserves in Senegal

BACHELOR'S THESIS

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Declaration

I hereby declare that I have done this thesis entitled **"Tourist attitudes towards natural reserves in Senegal"** independently, all texts in this thesis are original, and all the sources have been quoted and acknowledged by means of complete references and according to Citation rules of the FTA.

In Prague 4 April 2019

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Ahmadou B. Beye

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Abstract

Ecotourism is a valuable source of income for countries possessing a diverse and exotic ecosystem. There is, however, a lack of information about ecotourist's satisfaction in Senegal. A better understanding of tourist's experiences might therefore increase the country's ecotourism potential. The purpose of this study was to investigate tourists' attitudes, experience and animal preferences towards natural reserves in Senegal. The case study was conducted among 100 visitors of Bandia natural reserve in Senegal right after their visit. Their socio-demographic characteristics, animal preferences and opinion concerning information were collected and processed. The data was mainly collected through a questionnaire survey and analyzed with the use of descriptive statistics. The main findings of the study showed that the most popular animals in natural reserves are big herbivores, especially exotics ones especially (giraffe and white rhinoceros). It was also discovered that the majority of ecotourists were from France, young generation (19-29 years) and they were staying in the country for one to three weeks. Most respondents were decently informed about the fauna of the Senegalese natural reserves, they were therefore not willing to pay high amounts of money to have more information at their disposal. The results can be used by natural reserves managers in this area to better target tourists' needs and improve their marketing capacity.

Key words: ecotourism, natural reserves, tourist preferences, Senegal.

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List of the abbreviations used in the thesis

CULS: Czech University of Life Sciences Prague

GDP: Gross Domestic Product

MTTA: Ministry of Tourism and Aerial Transports

UNWTO: World Tourism Organization

USD: United States Dollar

1.   Introduction

Tourism is an activity that is present in almost all societies around the globe. The need to leave is the first motivation to travel and the most eminent. This will to leave reflects two desires: that of leaving daily stress and that of leaving frustrations.

At the top of motivations, all nationalities combined, systematically appears the desire to leave daily stress, to make a break with routine and to escape usual environment. This category of motivations has always been present since the beginnings of mass tourism, but it is even more unavoidable nowadays, because of the living conditions to which individuals are exposed. There are, strictly speaking, no specific destinations capable of satisfying this motivation. Any context sufficiently different from that of life or usual work is enough: the essential thing is the break.

Linked to this motivation also exists the need to leave frustrations, relax, to forget everything, to give time to time. The term of relaxation is more a reflection of mental rather than physical relaxation. The notion of relaxation can also refer to the possibility of pursuing activities that one does not have time to practice in everyday life.

According to the UNWTO (2018), 1.326 billion people did tourism during the year 2017. The most visited countries in the world are by order, France (86.9 billion), Spain (81.8 billion), United States and China with respectively 76.9 and 60.7 billion tourists.

Tourism receipts in 2017 were 1,340 billion USD with United States in head, gaining 210.7 billion USD from this activity. It also generates 10% of all jobs.

The International Ecotourism Society (2000) discovered that 20 to 40 % of total international tourism arrivals and total international direct economic impact are from wildlife-related tourism.

Having a better understanding of tourist preferences and needs towards wildlife related tourism could thereby lead to a better income for tourism companies and develop a country GDP.

2.   Literature review

2.1.   General tourist's attitudes towards natural reserves in Africa

The globalization and traveling facilitation between countries and continents took tourist experiences to a completely different level, making it the world´s largest business enterprise for many. Distant cities are more accessible than ever due to technology, and thus, visiting rare exotic animals in tropical continents like Africa is no longer a hard issue.

Tourism has a big potential in Africa, since wild animals, African culture, beaches tends to attract many tourists. For example, lions, antelopes, zebras, are species that are found almost exclusively in Africa. This continent also possesses a variety of landscapes that are suitable for safari. Most countries do not have many animals in a free-range state, especially big terrestrial animals. Tourists can therefore see an opportunity to discover animals only seen in documentaries.

A better understanding of the interest of tourists regarding natural reserves in Africa has, therefore, a great importance for our study.

Wildlife tourism is defined as "tourism based on encounters with non-domesticated animals" (Higginbottom 2004). It is an efficient compromise between durable economic benefits and a good sustainable management of wildlife (Manfredo & Larson 1993). Africa is, however, the least visited continents by tourists regarding animals. Table 1 shows zoo attendances around the world (Dick & Gusset 2010).

Table 1: Zoo attendances around the world in 2008

Continent	Total (millions)
Africa	8
America	186
Asia	221
Australia	17
Europe	142
Latin America	11
Global total	**585 million**

Source: Dick & Gusset 2010

Africa was indeed, the least visited continent with only 8 million attendances in 2008, compared to 221 million in Asia. There is, however a great inequality in term of tourist attendances between African countries. The World Tourism Organisation (UNWTO) established the list of international tourism arrivals in various African countries. A reorganization of these data and the making of a histogram of the 10 most visited countries was then necessary to facilitate the comprehension.

North African countries take the lead, with Morocco being first, Tunisia and Algeria occupying the third and fourth places. South Africa stands on the 2nd place of the most visited countries in Africa. Central-Eastern Africa (Mozambique, Zimbabwe, Kenya, Uganda and Namibia) take the rest of the ranking, except for Senegal, that takes the 10th place of the countries with the most tourist arrivals in 2013 (Graph 1).

Graph 1: International tourism arrivals for African countries

Bar chart values:
- Morocco: 10,046
- South Africa: 9,537
- Tunisia: 6,269
- Algeria: 2,733
- Mozambique: 1,886
- Zimbabwe: 1,833
- Kenya: 1,433
- Uganda: 1,206
- Namibia: 1,176
- Senegal: 1,063
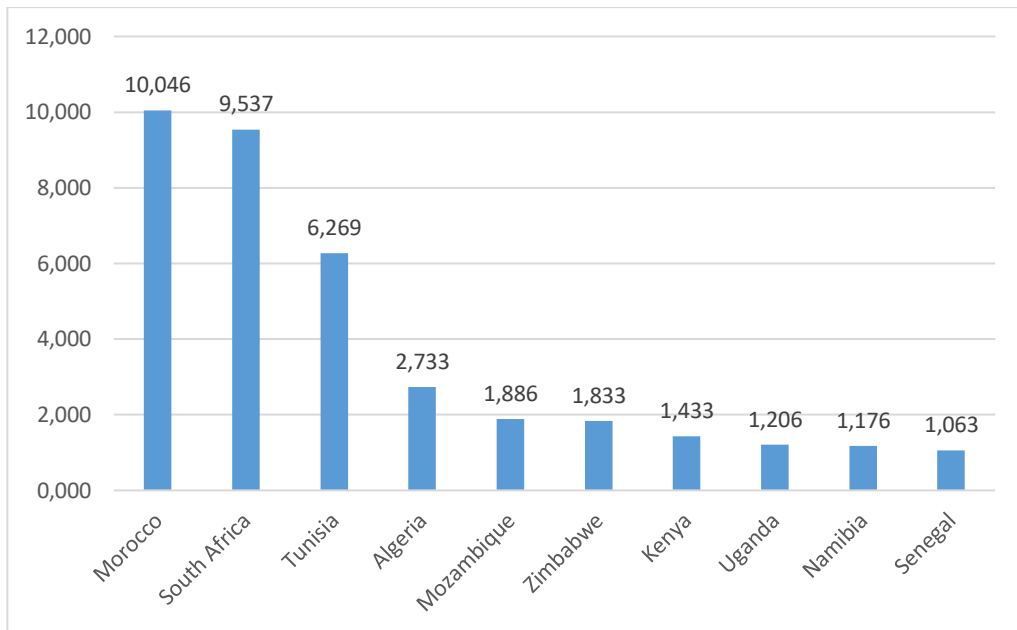
Source: UNWTO 2014

UNWTO (2014) also censed the tourism receipts of these African countries, and the top 10 that follows can be seen in the Graph 2. South Africa take the lead of the ranking, followed by North African countries, Morocco and Tunisia, even though Algeria is no longer a part of the ranking. Central and eastern Africa still take the rest, apart from two newcomers, Mauritius and Ghana. Senegal is no longer in the ranking.

Graph 2: International tourism income for African countries
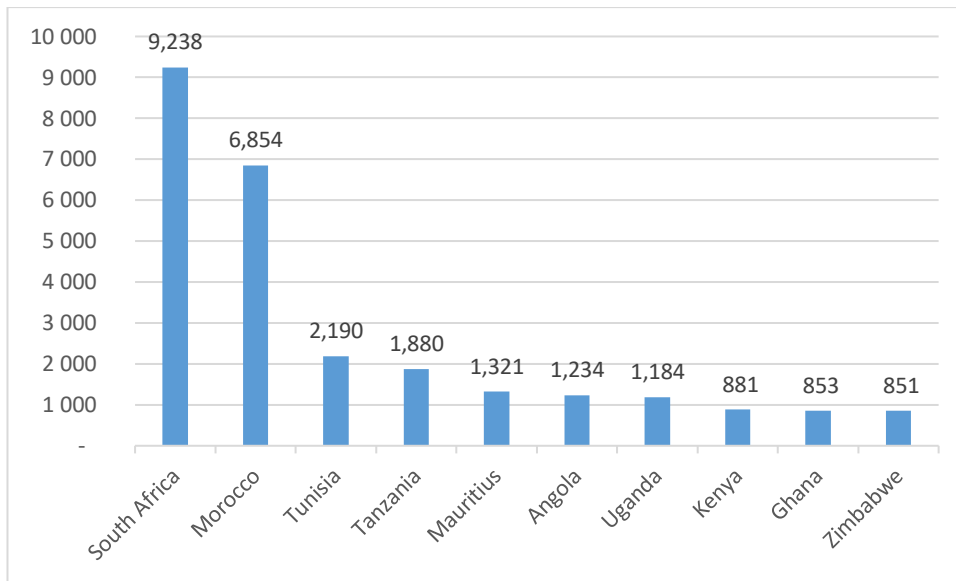
Tourists tends to be attracted towards exotic wildlife and flora, however information source is often a considerable problem in Africa. In the 2nd most visited country in the continent (South Africa), the lack of information has been noticed by many international tourists, even though they would be willing to pay more to have more accurate data (Loubser et al. 2001). A better supply of information in a more developed marketing strategy could even help the conservation of natural reserves due to the increased public awareness that would follow.

Long lasting partnership with local populations and sensitization to wildlife care in Kenya would however benefit local population, as well as natural resources (Wishitemi et al. 2015). Indeed, populations are not effectively participating in ecotourism, and cultivations have a negative impact on wildlife (Ogutu 2002).

2.1.1. Animals as tourist attractions in Africa

According to Higginbottom (2004), the most visited wildlife animals in Africa are large mammals (lions, tigers, elephants, giraffes, buffaloes, zebras, antelopes, oryx, ostriches, apes etc.) and birds (eagles, herrons, pelicans, vultures etc.). There is a large diversity in those mammals and various body sizes. Whales and penguins in marine areas, as well as crocodiles and hippopotamus in wetlands are very popular too.

In South Africa (Kruger National Park), tourism revenue of endangered wild dogs (*Lycaon pictus*) have a great economic potential to match and pass the costs of wild dog conservation in situ on ranchland or reintroductions (Lindsey et al 2005). However, the critically endangered white and black rhinoceros suffered from poaching in South Africa, which leaded to the improvement of conservation policies. Tourists tends to be favorable to the sale of rhinoceros horns, but against trophy hunting (Lee et al. 2016). Tourism hunting is, indeed, highly detrimental for most species. Originally used as a way of conservation for habitat protection in Tanzania, some species have been reduced to less than 10 % of population size. Elands, small antelopes, kudu, reedbuck and bushbuck were hunted to unsustainable levels in the long term. The number of natural predators (lions, leopards), however, is highly increasing. A solid regulation should be managed to reduce the impact of tourism hunting on wildlife (Caro et al. 1998).

2.2.   Tourist experiences in Senegal

Due to its multiple assets, Senegal have a great potential to attract a diverse and important flow of tourists. From its geographic, social, and climatic advantages, we can cite, among other things, a bordering of the Atlantic ocean on a large part of the country (important seaside tourism potential), a diverse fauna with unique species and the possibility to keep attractive animals to the ecosystem, a tropical climate all year long and the "Teranga", an hospitality based on sharing and welcoming strangers as a part of the family, hospitality that makes the country be known as "the open door of Africa" (Faye 1998). According to Index Mundi (2018), the seaside country is the second country in West Africa with the highest international tourism receipts following Ghana.

An important part of Senegal economy is assured by tourism. Indeed, tourism accounts for 7% of Senegal's GDP and the country hosts, on average, 500,000 tourists a year (Mendy 2015). In order to have a better understanding of the incomes linked to international tourism, the following Graph 3 from the World Bank should be addressed.

Graph 3: International tourism receipts in Senegal between 1995-2014

International tourism, receipts (million US$)

Source: World Bank 2019

Senegal was earning its lowest of the past two decades with international tourism from 1995 to 2000, with receipts from 183 to 152 million USD. Receipts then followed a continuous raise from 2000 to 2005 going from 152 to 334 million USD, then went through a fast boost and doubled from 2006 to 2007, before reaching its peak of 637 million during the year 2008. Earnings then dropped and kept a constant shape oscillating between 464 and 564 million from 2009 to 2014. Tourism is therefore a stable constant source of receipts for the country that have been giving results for a decent period and have the potential to keep flourishing.

Senegal's touristic activity is however very seaside oriented. Indeed, the country possesses 718 km of sandy beach, extending from Saint-Louis to Casamance. It is positioned as the first seaside destination in French-speaking Africa. The seaside activity is mainly located in the Petite-Côte (Thiès region) with its multi-faceted beaches, such as the seaside station of Saly. It is also present in the region of Dakar, which is a peninsula, the seaside station of Cap Skirring in the region of Casamance, without forgetting the Hydrobase of Saint-Louis.

The development of seaside tourism was directed by a logic of promoting fresh "tropical" seaside destinations in response to the mass tourism demand of the 1970s. Seaside area underwent profound changes from a "repulsive state to an attractive state" (Corbin 1988). Several state-led touristic projects have been established towards coastal

areas, notably the Petite Côte (Saly Portudal among others) and the Basse Casamance. The coastal area is now conceived as a reservoir of wealth capable of responding to a tourism demand. In this perspective, the country is divided into tourism development zones that give priority to four coastal poles, namely the one cited above: Dakar, Saint-Louis, Thiès and the Basse Casamance. The Figure 1 shows the main touristic regions in Senegal.

Figure 1: Touristic areas in Senegal
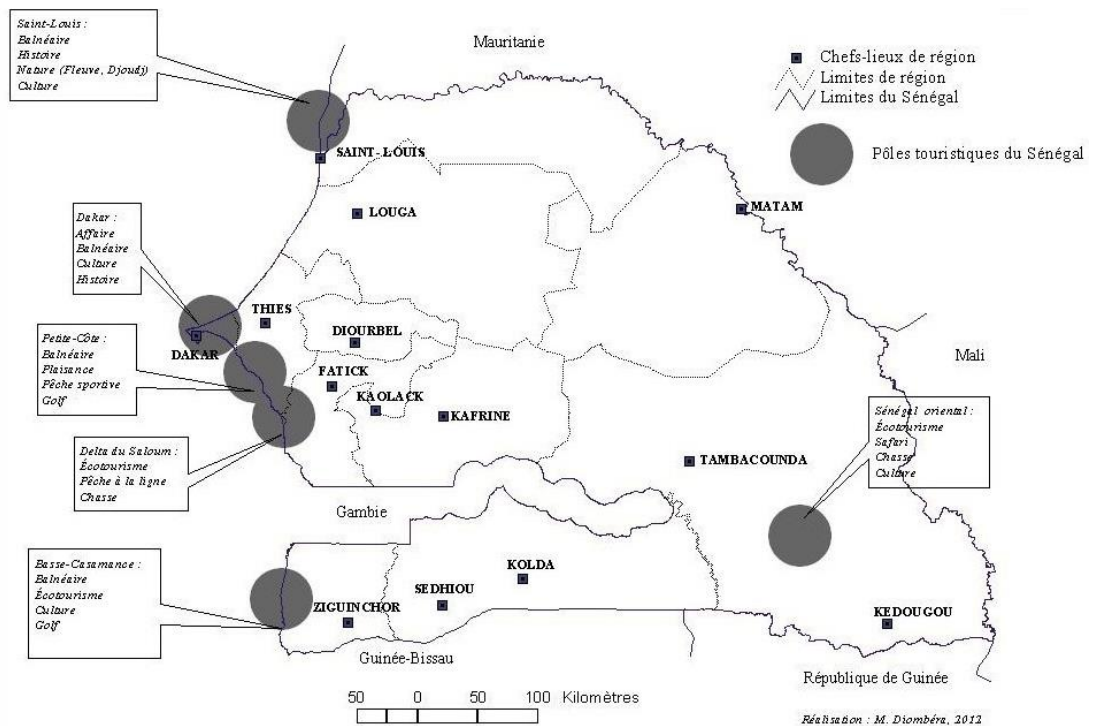
Source: Diombéra 2012

If seaside activity is thus an ancient fact on the Senegalese coastline, it has long remained secondary and limited to the Petite-Côte. It was not until the 1960s that the sudden eruption of mass tourism disrupted Senegal's coastal economy and affected traditional activities. The development of coastal tourism has undergone a spectacular development. In the context of drought in the 1970s, which affected groundnut production by dropping the country's foreign exchange earnings, the government took the strategic option of developing tourist activity on the coast.

That development of touristic activity hence the creation of multiples hotel and para-hotel residences in the early 90's, in order to answer an on growing accommodation
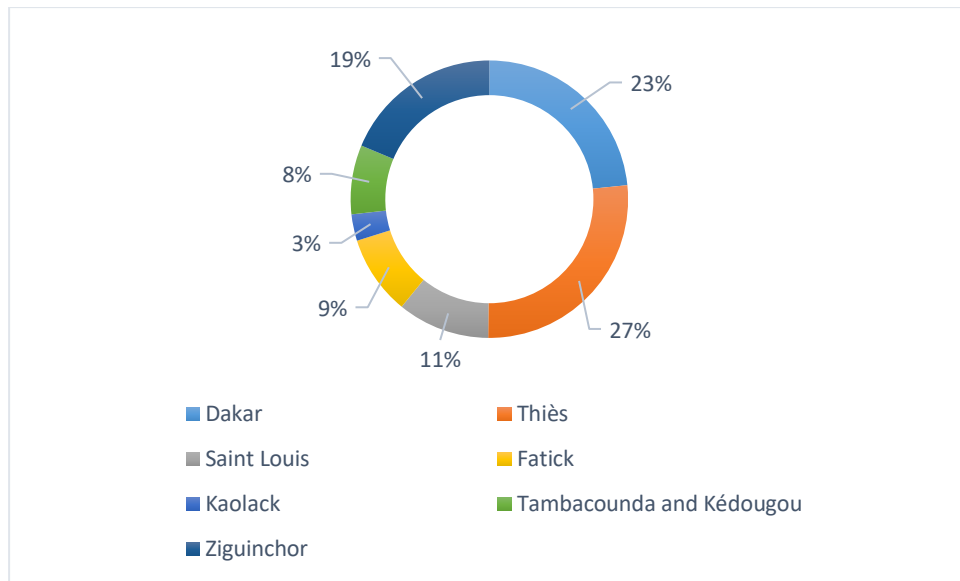
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demand in seaside sites like Saly Niakh-Niakhal in the Petite-Côte, Diembéring in Basse-Casamance.

In truth, spontaneous development under the pressure of mass tourism is currently sparing neither the terrestrial environment nor the marine environment. It affects several sectors, particularly forests and farms whose areas are shrinking more and more in front of the property boom characterized by a spatial organization favoring accommodation receipts of seaside tourism.

The numerous publications on the theme of tourism in Senegal, reveal a marginalization of local populations (Mendy 2015). That exclusion of local populations has an impact on the traditional structure of touristic regions society and brings social deviations like prostitution and mugging. Many villages in the Petite Côte has been changed for cheap labor, and local population are abandoning agriculture. A better integration of locals must be put in place to create a sustainable development with the local economy (Diagne 2004).

Moreover, it is the entire coastline that is now plagued by the phenomenon of anarchic residences. For example, there are some 45 cottages with a capacity of 2220 beds (MTTA 2015), but in fact, there are several hundred residences not listed by the state found on this coastal area without an overall plan. These occupations of the coastal area, especially the seafront, are a serious concern from the point of view of spatial distribution and land use. Therefore, the coastline has become a real problem area in terms of land control. Weekend houses or isolated private homes are created in a chaotic way without the least control or compliance with the laws and regulations in force in terms of land use and shoreline, causing the swelling and budding cities and outlying villages. This is shown in Figure 2 on the distribution of touristic residences by region where we note their high concentration on the main coastal regions of the country.

Figure 2: Breakdown of touristic residences by region (2015)

Legend:
- Dakar — 23%
- Thiès — 27%
- Saint Louis — 11%
- Fatick — 9%
- Kaolack — 3%
- Tambacounda and Kédougou — 8%
- Ziguinchor — 19%

Source: MTTA Senegal 2015

The above cited problems contributed to awaken the populations and the government to the necessity of managing space and natural resources. Therefore, a pronounced focus is on eco-tourism. Figures 3 and 4 indicates that Thiès has one of the biggest attracting potential for tourists, which explains the success of the Bandia Reserve, located near the Petite-Côte, in Thiès region. The large number of tourists, 33,000 visits announced in 2001, (Vincke et al. 2005), linked to its exceptional location (in the heart of the Senegalese tourist zone) is an undeniable success considering the generally low attendance of national parks and reserves in West Africa. Visits, very convivial, lasting on average an hour, are made in specially arranged vehicles accompanied by competent guides. Wildlife is within vision and reach of tourists. The entrance and the bar are well arranged, offering traditional meals and themed playgrounds for children, giving to the visitor a strong immersion. The offer is therefore particularly suitable for mass tourism. On the other hand, according to Vermeulen (2006), the main weaknesses of this visit might be the poor quality of the information provided (no scientific explanation available outside the words of the guides) and the omission concerning the exotic species. It is not mentioned that they are not representative of the Senegalese fauna, which gives the average visitor a totally biased vision.

Other national parks and reserves in Senegal includes Fathala reserve, Niokolo-Koba national park, Djoudj national bird park etc.

The lack of data in regard to eco-tourism visits (MTTA 2016) prevents a comparative analysis of natural reserves in Senegal, it is however possible to comment on the most visited regions, as well as the nationality of the tourist flow arrivals. The following table (Table 2) shows the arrivals of non-residents by Senegalese region in 2015 (MTTA 2016).

For a better understanding of the situation, the regions where are the main natural reserves and national parks of the country has been highlighted. The yellow color has been chosen for Thiès (Bandia reserve) and green for Fatick (Fathala reserve). France possesses the biggest arrivals in the Senegalese territory, followed in Europe by Benelux (Belgium, Luxembourg, and Nederland). The sharing of a common language and the long-term history of France with Senegal are most likely to explain this phenomenon. A solid number of visitors from USA, Spain, Italy, and Far East is also notable. Arrivals from African countries should not be neglected, especially neighbor countries (Mali, Ivory Coast).

The biggest arrival flow concentrates in Dakar and Thiès. Ziguinchor and Saint-Louis takes the 3rd and 4th position, followed by Fatick. More than 10 times more visitors pass through Thiès than Fatick.

Bandia reserve has been therefore placed at an optimal position to catch one of the largest flows of tourists possible inside the Senegalese territory.

Table 2: **Nonresident arrivals per region in Senegal (2015)**

Country	Dakar	Diourbel	Fatick	Kaolack	Kédougou	Kolda	Saint-Louis	Sédhiou	Tambacounda	Thiès	Ziguinchor	Total
Benelux	9,790	0	4,978	0	158	3	1,674	0	121	6,977	2,900	26,600
Benin	2,409	0	5	102	11	5	113	8	11	174	134	2,972
Burkina Faso	3,382	0	0	0	51	11	91	3	16	137	137	3,828
Canada	3,337	0	21	0	113	21	346	0	67	1,277	247	5,429
Eastern countries	1,271	0	0	0	0	0	46	0	0	1,178	115	2,610
Far East	13,350	0	30	0	67	16	738	0	72	1,945	553	16,770
France	98,371	62	16,563	11,802	526	882	11,738	274	799	61,248	16,287	218,552
Germany	2,886	13	118	0	67	11	1,143	3	59	2,393	1,073	7,765
Great Britain	6,244	8	83	0	30	5	410	13	40	1,521	188	8,543
Guinea Bissau	3,248	3	0	0	8	107	325	21	16	260	2,653	6,641
Italy	6,443	13	244	0	75	0	764	11	86	2,006	853	10,496
Ivory Coast	8,262	0	0	0	11	3	198	0	8	325	67	8,873
Mali	8,852	8	13	0	110	0	266	3	75	676	118	10,120
Near/Middle East	7,151	0	0	0	8	0	290	0	3	783	166	8,401
Niger	2,307	0	0	0	30	0	35	0	5	180	59	2,615
Other African countries	133,359	35	13	0	1,161	507	9,855	13	5,118	18,655	9,289	178,006
Other European countries	6,923	0	1,148	0	19	54	1,269	0	172	4,520	362	14,466
Portugal	2,237	0	91	0	5	0	397	0	13	1,317	536	4,597
Rest of the World	76,306	0	241	0	0	0	156	0	78	11,977	477	89,235
Scandinavian countries	2,296	8	8	0	19	0	102	0	11	515	298	3,256
South America	1,650	0	3	0	11	0	185	0	8	644	174	2,674
Spain	11,724	24	384	0	292	150	1,599	13	319	3,109	3,417	21,032
Sweden	1,762	3	322	0	30	0	435	0	30	1,615	866	5,062
Togo	1,883	0	8	0	5	0	113	5	5	139	48	2,208
USA	13,597	0	201	0	121	19	1,481	0	247	2,905	1,169	19,739
Total Non-Residents	**429,041**	**177**	**24,476**	**11,904**	**2,926**	**1,794**	**33,765**	**367**	**7,379**	**126,474**	**42,187**	**680,491**

Source: MTTA Senegal 2016

3.   Aims of the Thesis

The main objective of this study is to analyse tourist attitudes and preferences regarding natural reserves, as well as the information at their disposition. This study was conducted in August 2018 in the Bandia reserve in Senegal.

The specific objectives are:

- To determine socio-economic characteristics of respondents, which may have an influence on their attitude (gender, education, marital status, age, children, religion etc.).
- To analyze tourist's preferences regarding animals in natural reserves and their motivations to visit those animals.
- To identify the motivation aspects and barriers to visit the natural reserves.
- To determine whether specific information regarding ecotourism is available.

4. Methodology

4.1. Research design

Primary and secondary data were collected for research purposes. To reach the objectives of the study and to have a better understanding of touristic attitudes toward wildlife in Bandia reserve, a combination of qualitative and quantitative data collection was used.

Secondary data were obtained through different sources, according to the needs of the study. The biggest sources of information were international organisations such as the World Bank, the World Tourism Organisation, World Association of Zoos and Aquariums among others. Documents from Senegalese government organisations such as the MTTA was also used. Other secondary data sources used in this study were scientific journals such as Wildlife Society Bulletin etc.

Primary data were mainly collected by the integrating tourists present in the reserve into the research. For the most part, the tourists just finished the visit of the reserve, their experience was therefore as fresh as possible, which eliminate any errors due to the alteration of their memories. The study was based on a convenient sample of 100 international tourists in Senegal at the reserve of Bandia between July and August 2018.

4.2. Data collection tools

The data collection tool used for the study was a questionnaire survey. The questionnaire was delivered to tourists to collect data. The questionnaire was oriented towards three major fields: (i) the tourist's attitude toward wildlife in natural reserves, (ii) the tourist's opinion regarding available information, and (iii) socio-demographic data of the respondents.

The first part of the questionnaire was focused on tourist's preferences towards wildlife in natural reserves, where the emphasis was putted on the animals they know and/or would be willing to visit (or already visited/ would like to visit again), the reasons

why they are choosing (or not choosing) such animals. Respondents were always given the opportunity to specify other options or animals that were not on the questionnaire.

The second part of the questionnaire was aimed on the tourist's thoughts and opinions on the availability or lack of valuable information. The first aim was to learn from the respondent how did they get to know about natural reserves and the wildlife in Senegal. After that, a five point Likert scale (1: strongly agree, 2: agree, 3: neutral, 4: disagree, 5: strongly disagree) was used to have the opinion on information about wildlife in natural reserves: The respondents were then asked to freely respond on what kind of information could be missing, whether they would be willing to pay to have more accurate information, and how much in dollars, in case they would agree.

The third part of the questionnaire was focused on socio-demographic characteristics of the respondents. The following information were collected about the respondent: gender, age, marital status, number of children, presence of the family, education, religion, duration already spent in the country, total duration of the stay in the country and home country.

4.3. Study sample

The study was based on a random sample of 100 international tourists in Senegal at the reserve of Bandia between July and August 2018, in order to collect the qualitative and quantitative data necessary to pursue the research.

The questionnaire was first tested on a small sample of 10 tourists in Saly Portudal, Senegal. The seaside town was chosen because of its proximity with the reserve, it was thus possible to find a multitude of tourists that already visited the reserve. The test was designed to find eventual flaws of the questionnaire and apply modifications in case of need. The questions were delivered in both English and French language, depending on the free will of the respondent.

4.4.   Study site

The research has been conducted in the Bandia natural reserves, located near the village with the same name. Bandia is located 65 km from Dakar, the capital city, 14° 36' North, 16° 57' West. The reserve was funded in 1990, has a surface of 3,500 hectares, and is entirely fenced. Contrarily to many other natural reserves in Senegal, Bandia reserve is not principally dedicated to birds. Numerous mammals can be found there, which have been reintroduced to the region. It is possible to find rhinoceroses, giraffes, big antelopes, dama gazelles, derby elands, buffaloes, patas monkeys, warthogs, zebras, jackals and a multitude of birds (near 120 species), ostriches giant turtles, crocodiles and so on. An interesting flora is also observable, with baobabs (*Adansonia Digitata*) among others. This reserve is suitable for the study due to its strategic localisation between Dakar and Mbour (Saly), which are two of the main tourists' attracting places in Senegal.

Figure 3: Localization of Bandia natural reserve

Source: cityzeum.com

4.5.   Data analysis

Data was collected via a questionnaire survey involving a group of 100 tourists. Data collected through the study was compiled into Microsoft Excel to be able to utilise and analyse them. Basic descriptive statistics such as frequency analysis and crosstabulation computation were used in order to accurately describe sampled data. Results obtained from statistical analysis were risen in form of graphs and tables for better understanding.

4.6.   Limitations of the research

The most important limitation factor of the research was that all questions were not always responded. Given that the tourists were asked to fulfil the questionnaire just after their visit of the Bandia fauna and flora, they were often desiring to go have lunch or leave the reserve. The questionnaire was therefore sometimes rushed, leaving some questions blank. The same problem occurred in the animal preference part, with some respondents giving the answer "yes" to every answer and for every animal for the questions regarding if they knew, visited and would like to visit the animal.

The second limitation of the research was the fact that respondents in a group often concerted each other and answer questions together. Some answers could have been therefore biased or partially identical in some questionnaires in case of family or couples, or groups of friends who shared the answers together.

A third minor limitation of the study concerned the fluency of the language. Even though the research was delivered through questionnaires in French and English, some tourists were not native speakers of those languages. A few of them were not too fluent in English, knowing just the basics. Respondents were however asking for more information about questions that they did not understand most of the time.

5.   Results

5.1.   Socio-demographic characteristics

The study was conducted among 100 tourists, male and female, from diverse age groups. Their socio-demographic characteristics are shown in Table 3. The gender of the study sample was divided into two groups, male and female. The female part of the sample was significantly higher than their male counterpart (54%). Age group was split into six subcategories. The most significant age group in the sample was the 19-29 group (53%). The number of tourists older than 49 is relatively limited, reaching only 6% of total responders. Most participants were however married (66%), without children (66%) and/or came to the reserve without relatives (56%).

The biggest part of the tourist flow has an education level. If we focus on education level, 83% of participants reached at least university, against 2% that did not go higher than primary school. The survey included questions regarding religious beliefs. The numbers are however relatively close, with Christians, Muslims and atheist/agnostics each sharing approximatively a third of all questionnaires.

Table 3: Socio-demographic factors of the respondents

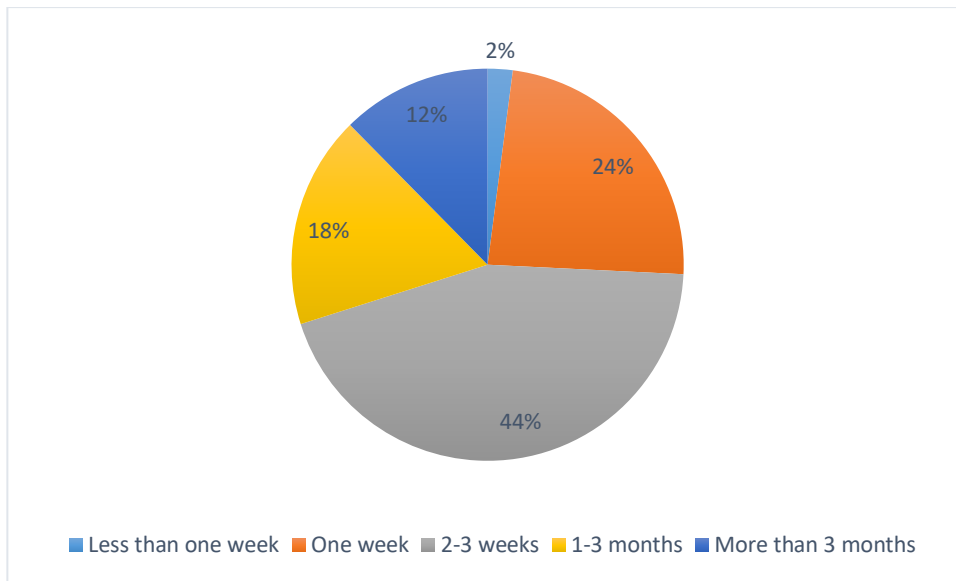| Characteristic	Frequency (n)	(%)
Sample	**100**	**100**
Gender	**100**	**100**
Male	46	46
Female	54	54
Age	**100**	**100**
Under 18 years	7	7
19-29	53	53
30-39	14	14
40-49	20	20
50-59	3	3
60 and above	3	3
Marital Status	**99**	**100**
Single	34	34.4
Married	65	65.65
Children	**96**	**100**
0	63	65.62
1	9	9.37
2	8	8.33
>2	16	16.67
Came with family	**100**	**100**
Yes	44	44
No	56	56
Education	**97**	**100**
Primary school	2	2.06
High School	14	14.43
University	36	37.11
Post graduate	45	46.39
Religion	**99**	**100**
Christian	33	33.33
Muslim	32	32.32
Atheist / Agnostic	33	33.33
Other	1	1.01

The following Graph 4 indicates the home country of the 100 respondents of the study. The analysis of collected data showed an astonishing dominance of French tourists. Half of all respondents are from French nationality, while the other 12 other nationalities share the remaining half. In total, 71% of visitors are also from a French speaking country (France, Belgium, Morocco, Senegal, Gabon and Ivory Coast). In general, 75% of total respondents originated from a European country, while 13% were coming from an African country.

Graph 4: Country origin of the respondents
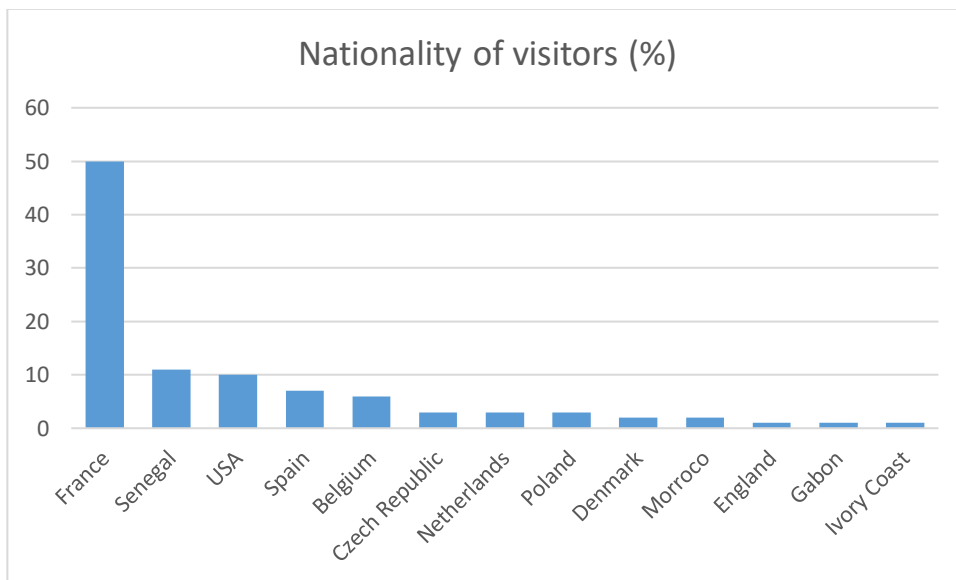
The most frequent length of stay in the country is two to three weeks (44%), as shown in the Graph 5, which indicates the length of stay of tourists. Only 12% of tourists planned to stay more than 3 months in Senegal, and they were French or Senegalese residents, for the most part. Almost no respondents however planned to stay for less than a week (2%). Therefore, the biggest flow of tourists is staying in the country between one to three weeks (68%).

Graph 5: Length of stay in Senegal of tourists

Pie chart: Less than one week 2%, One week 24%, 2-3 weeks 44%, 1-3 months 18%, More than 3 months 12%

Legend: ■ Less than one week ■ One week ■ 2-3 weeks ■ 1-3 months ■ More than 3 months

## 5.2.   Tourist's attitudes towards wildlife

In order to identify the attitudes of tourists towards animals of the Bandia reserve, respondents of the questionnaire have been asked to give some information about their visit. They were asked if they knew the animal prior to the visit, if they have seen it during the visit, if they would like to see the animal before visiting and if they will have interest in seeing the animal again. Their responses are showed in the Graph 6.

According to the data, the most requested animals prior to the visit were the white rhinoceros, the giraffe, the West African crocodile and the giant turtle (99% each). The most desired animals after the visit were the white rhinoceros (99%), the giraffe (98%), the derby eland (97%) and the West African crocodile (97%). The most known animals were the zebra (100%), the ostrich (100%), the giraffe (99%), the warthog (98%) and the giant turtle (98%). The most visible animals were the giraffe (99%), West African crocodile (99%) and the zebra (99%).

The analysis of collected data showed that the derby eland was the least knew animal prior to the visit. Respondents however seemed to appreciate the experience and would be open to visit the animal again (97%). The ostrich was known by all respondents but is seems to be the least appreciated animal experience (90% willing to see it again).

Interestingly, the white rhinoceros is the least seen animal (67%) despite being one of the most desired (99%).

**Graph 6: Attitudes of tourists towards selected animals**
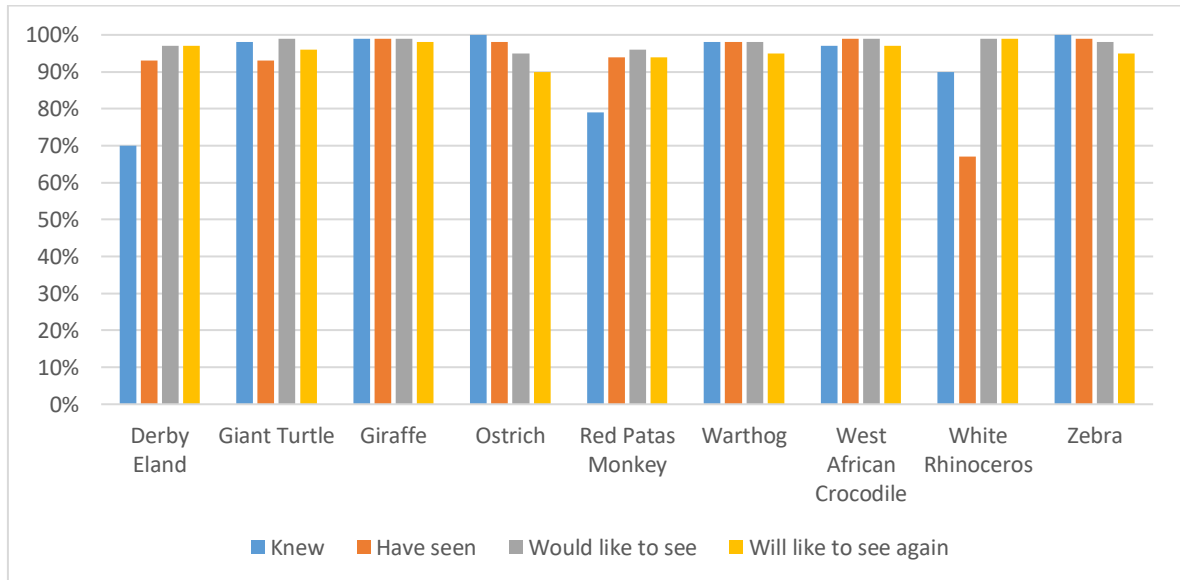
5.3. Availability of information

Tourist's point of view towards the availability of information was obtained via a Likert scale for the satisfaction, as well as various multiple-choice questions. The results of the Likert scale question are represented in the following Graph 7.

Collected data showed that clients are, for the most part, satisfied with the available information about wildlife in the natural reserve (90% satisfied or strongly satisfied). The number of unsatisfied tourists is very low (2%).

Graph 7: Satisfaction about available information by tourists
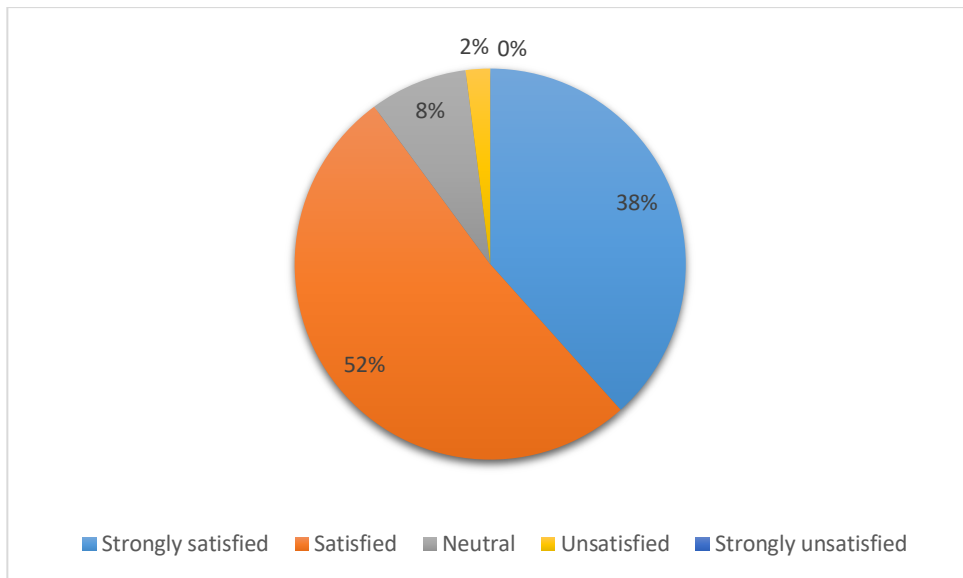
Surprisingly however, 40% of the tourists would be willing to pay additional fees to have more accurate information about wildlife.

The following Graph 8 indicates the cumulated frequencies of the amount of USD that the tourist would be willing to pay for information. As expected, the majority (75%) will not be paying more than 10 USD for additional data. Likewise, no respondent is open to offer more than 31 USD. Multiple respondents wrote in commentary that the entrance fee is already quite high.

Graph 8: Amount of money willing to be paid by tourists for more information (cumulated frequencies, USD)
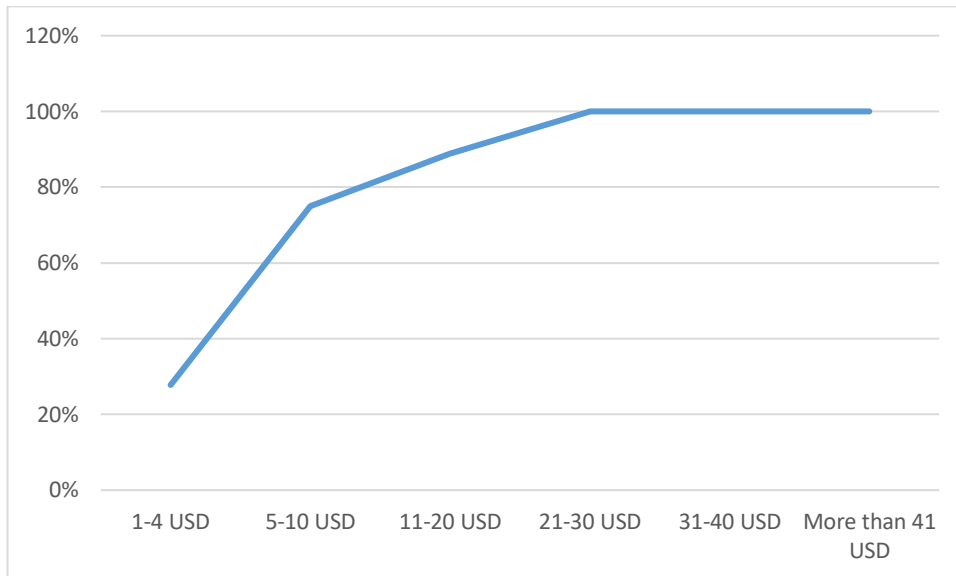
Concerning the way respondents heard about the natural reserve, the data shows mixed results. The Graph 9 indicates the sources of information that made respondents hear about Bandia reserve. The biggest part of the tourists got recommendation by relatives (30%). Local people (27%) and promotional material like Internet pages (27%) also had an important role. Most female respondents heard about the reserve from a local people (16%), while males were mainly influenced by friends or family members (16%).

Graph 9: Source of information about the natural reserve
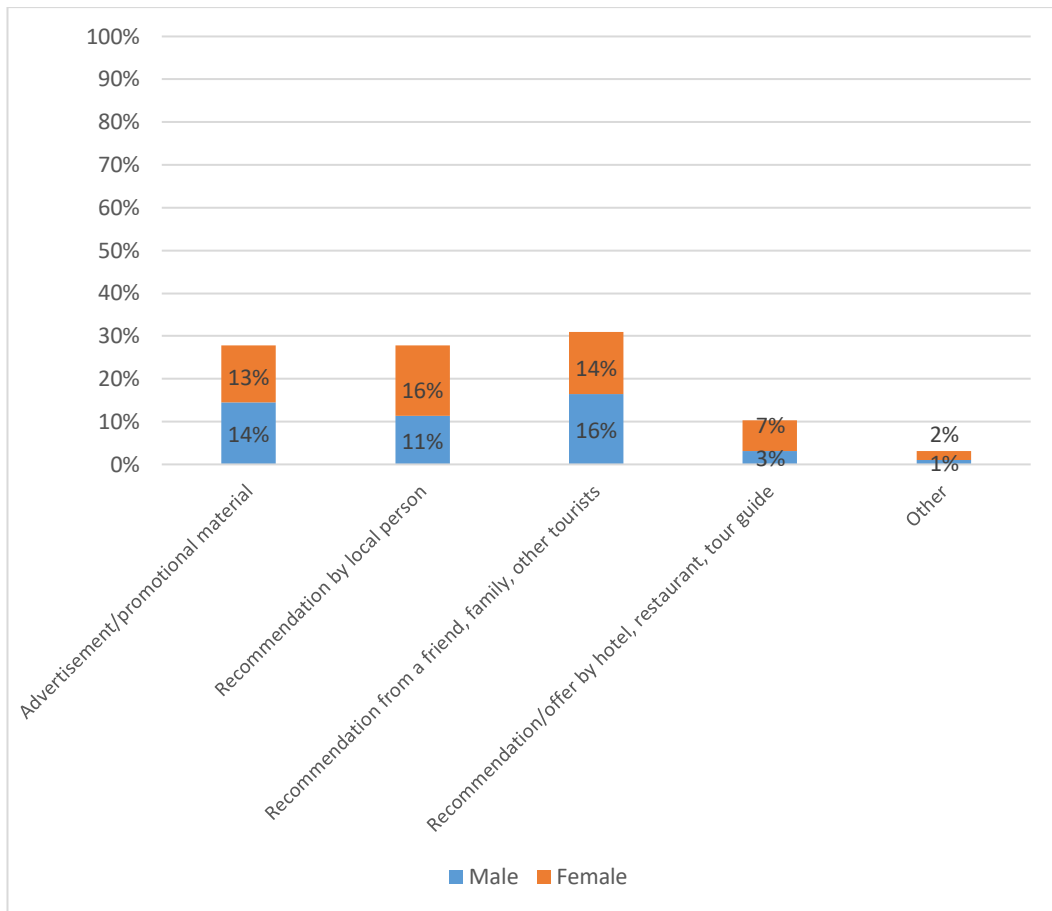
Knowing the means by which respondents heard about the reserve, the next logical task was to discover their motivation to decide to visit. Responses have been compiled according to the gender of tourists in the following Table 4. Most respondents were motivated by their interest to discover exotic animals (46.9%). Females were slightly more interested in having more experiences than males (10% against 11.5%). Some of the other reasons given by tourists included structured program activity from abroad studies or profession (veterinarian).

Table 4: Motivation to visit the natural reserve

	Gender		
Variables	**Male**	**Female**	
Influence choice	**%**	**%**	**Total**
Interest to discover exotic animals	24.0	22.9	46.9
Interest in having new experiences	11.5	18.8	30.2
Recommendation (friend/tourist/local person)	10.4	9.4	19.8
Other	1.0	2.1	3.1
Total	46.9	53.1	100.0

Lastly, the reasons not to visit the natural reserve was asked. Respondent's answer has been rewritten in the Table 5. Most respondents would have been repelled by the price (46%). This concern is however more present regarding women (27%) than men (20%). The lack of time, however (20%), is a biggest preoccupation for male respondents (14%, 2nd rank) than female ones (5%, 4th rank). Other responses written included the multiple other touristic places and lack of interest.

Table 5: Potential reasons not to visit the natural reserve

Variables Influence choice	Gender Male %	Rank	Female %	Rank	Total	Rank
Fear of possible dangers	8.9	3	7.1	3	16.1	3
Fear of trying new experiences	0.0	5	5.4	4	5.4	5
Lack of time	14.3	2	5.4	4	19.6	2
Price	19.6	1	26.8	1	46.4	1
Other	3.6	4	8.9	2	12.5	4
Total	**46.4**		**53.6**		**100.0**	

6.   Discussion

The data analysis of the present study presents various valuable information about tourist's attitudes towards Bandia reserve, both regarding their animals and the availability of information. The emphasis was established on their animal preferences and visibility, satisfaction and source of information.

The first aim of the research was to analyse socio-demographic characteristics of the questioned tourists present in the reserve. According to Oh et al. (2004), socio-demographic characteristics like age and gender have a significant influence on touristic shopping preferences and activities. A better understanding of touristic socio-demographic information can result in a better marketing, management and improved services. Available literature in regards to the topic of education and international tourism tends to show that there is an "equilibrium relationship and causality" between international tourism and higher education (Katircioğlu 2010). International tourists are therefore more likely to possess an elevated educational level than a lower one. Results provided by the current study directly correlates with the previous statement, providing that the highest part of tourists present in the reserve had a university level of education.

Concerning nationality, Kozak (2002) stated that travellers from different nationalities travels for different reasons and aims for different destinations. German tourists for examples were more likely to travel to Turkey for relaxation purposes, while British visitors were more looking for "pleasure-seeking/fantasy". Dehoorne and Diagne (2008) reported that tourists visiting Senegal are mainly coming from Europe, more particularly from France (50%). The African market accounts for 23% of arrivals, while arrivals from Canada and South America represent only 0.3% and 0.1% respectively. The results of the study confirm this statement, with exactly 50% of respondents coming from France. The number of tourists from African countries was, however, much lower (12%). That lower flow of African tourists visiting the reserve may be explained by the cultural proximity between the countries. Indeed, Turner et al. (2002) noted that although there is not much evidence of a causal relationship between satisfaction and service quality, diverse levels of cultural differences implicates different levels of satisfaction in tourism. Cultural differences therefore cause an increased interest in tourism, while similarities

limit the will to visit a country. No respondents were from Latin America nor Canada, which once again correlates with the above-mentioned research.

In regard to the length of stay, Alexander (2012) showed that tourists tend to spend ten weeks on average in South Africa, with the majority of them choosing to stay longer than a month within the territory. Visitor's most common length of stay was between four to eight weeks. The typical length of stay of the present study however is significantly shorter, with the biggest tourist flow staying in Senegal between one to three weeks. This observation could be explained by a notion present in diverse studies (Menezes et al. 2009; Barros et al. 2008; Kozak 2001), stating that longer stays in a foreign country potentially implicates more costs and expenditures. Adding the fact that most of our respondents were relatively young (53% in the 19-29 age group), and as shown by Wang et al. (2012), the older a tourist is, the more susceptible he would be to stay for long periods while travelling.

The second objective of the study was to identify tourist's preferences concerning the wildlife present in the Bandia reserve, prior and after the visit, in order to better assess the attractive potential of some species over the others. According to the research literature, mega-herbivores and large carnivores are the species with the higher popularity among tourists in protected areas, especially among first-timers and occidental tourists (Lindsey et al. 2007). Charismatic mega-animals therefore have the important flagship role of attracting considerable quantities of overseas and first-time tourists to natural reserves. According to Maciejewski & Kerley (2014), there is no existing difference between local and animal species originating from another country concerning the tourists' preferences, watching time and interest in the animal. As previously mentioned, the study also states that larger and charismatic animals contribute better to tourist satisfaction than small ones, which are mainly adding costs to the natural reserves. The results of the current study go on the direction of the scientific papers. Indeed, the white rhinoceros and the giraffe both figure among the most desired animals prior and after the visit of the reserve. The red patas monkey, which is the smallest animal of the study, is also the least desired by tourists. Regarding the territoriality however, foreign animals tends to be more appreciated than locals are. The giraffe and white rhinoceros have a bigger popularity than the derby eland, which is the only one among the three big herbivores to be naturally present in Senegal.

The third aspect of the research was focused on the availability of information. The point of view of tourists was collected regarding their satisfaction, their willingness to pay for more data, their source of information about the reserve among others. According to Lyu & Hwang (2015), the omnipresence of internet in today's society facilitates the acquirement of information like never. Tourists are able to obtain most of the information they need by themselves from their phone or computer, regardless of their location. Their demand for information is therefore highly reduced. In the case that respondents are satisfied with the information at their disposition, it should be suspected that they would not be willing to pay high fees to obtain more information. Cetin et al. (2017) found that travelers are usually more consentient to pay for additional fees when something significant is added to their touristic experience. Those assessments confirm the result of the present study. The influence of internet could explain the fact that almost all respondents affirmed being satisfied with the information, the fact that they are already satisfied enough explains that 75% of the tourist would not be willing to pay more than 10 USD.

Concerning the source of information, Gitelson and Crompton (1983) discovered that females usually receive more information from advertisement medias than males. This claim is not confirmed by the study, in which almost the same percentage of males and females learned about the reserve through advertisement. About the motivation to visit the reserve however, data seems to go in the direction of the research. Indeed, according to Jang & al. (2009), the biggest tourist's motivational factor for travelling is novelty seeking. The present study confirms that statement, with the biggest number of male and female respondents being attracted towards the reserve with the aim of living new experiences. Concerning the discouraging factors, the gender analysis of data allows a better interpretation of the results. Indeed, females have a greater mean of pricing perspective than males (Rambi & al. 2017). They are also more effective in time management than males (Misra & McKean 2000). It is therefore understandable that the biggest part of female respondents is concerned about price, but do not seems to see the lack of time as an important issue.

6.1. Recommendations

Based on the research outcomes I would like to suggest the following main recommendations to improve marketing strategies of natural reserves in Senegal.

- Bandia reserve would benefit in working on improving the visibility of the white rhinoceros. Indeed, while being the preferred animal, the white rhinoceros was the least visible by tourists.

- Bandia reserve should also increase their advertisement concerning the Derby Eland. Being a big herbivore, it has a big attractive potential (Lindsey & al.). However, only 70% of tourists knew the animal.

- Considering that more than 70% of the visitors are from a French speaking country, it would be suitable for Senegalese national reserves to have the bulk of their documents in French, but they should also have the accurate translations in English for the remaining minorities.

- Supposing that 98% of tourists stays at least a week in the country, it could be interesting to consider accommodation facilities inside or near the reserve.

7.   Conclusions

Understanding tourist's attitudes and preferences has a crucial importance when it comes to raising the satisfaction of visitors in natural reserves. There is however, a lack of information about tourist's experiences on Senegalese natural reserves due to the privacy of the most attractive ones. The present study could therefore benefit natural reserves holders to better answer to the expectations of visitors.

This research contributes to the identification of the animal preferences of international and local tourists inside the Senegalese ecotourism industry, as well as their level of satisfaction with the information that is at their disposition, while considering socio-demographic factors such as gender, nationality, age, education and length of stay in the country.

The main findings of the study were that the most attractive animals in natural reserves according to visitors were big mammals. Exotics ones especially (giraffe, white rhinoceros) are the ones with the highest popularity while small local animals such as red patas monkeys have a lower interest. Another interesting finding was the profile of the Senegalese natural reserve visitor. The average ecotourist is educated, European, young (aged from 19 to 29 years old) and staying for a max length of three weeks. The biggest tourist motivation to visit natural reserves is to have new experiences, therefore most respondents are well informed about the fauna of the reserves that they aim to spend time in, therefore they are not willing to pay high amounts of money to have more information at their disposition.

These findings give an insight on eco-touristic preferences and needs, and the recommendations should be considerate by Senegalese natural reserves. Further, similar research can also be conducted in a public Senegalese natural reserve in order to make a comparison with the results of the present study.

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Appendices

List of the Appendices:

Appendix I. Questionnaire sample (english).

Appendix II. Photos from the research.

Appendix 1: Questionnaire sample (English)

Research organized by

Faculty of Tropical AgriSciences, Czech University of Life Sciences Prague (CULS),
Czech Republic

Objective of the Study:

This is a study by CULS Prague designed to understand the tourist's preferences and recommendations about natural reserves in Senegal. The information gathered will be used to improve natural reserves tourism and provide a better quality of information to visitors willing to have a good touristic experience in Senegal. Your sincere response will be very much appreciated.

1. Would you like to observe / have you observed any animals during your stay?
    A. Yes   B. No (please continue with question n. 4)

2. Can you please select local animals which you know, would like to see and/or have seen?

Name of the animal	I knew	I have seen	I would like to see	I will like to see again
Derby Eland	Yes / No	Yes / No	Yes / No	Yes / No
Warthog	Yes / No	Yes / No	Yes / No	Yes / No
White Rhinoceros	Yes / No	Yes / No	Yes / No	Yes / No
Giraffe	Yes / No	Yes / No	Yes / No	Yes / No
West African Crocodile	Yes / No	Yes / No	Yes / No	Yes / No
Red Patas Monkey	Yes / No	Yes / No	Yes / No	Yes / No
Ostrich	Yes / No	Yes / No	Yes / No	Yes / No
Giant Turtle	Yes / No	Yes / No	Yes / No	Yes / No
Zebra	Yes / No	Yes / No	Yes / No	Yes / No
Other (please specify):				

3. What influenced you to visit the natural reserve?
    A. Interest to discover exotic animals
    B. My interest in having new experiences
    C. Recommendation from a friend/other tourist/local person
    D. Other (please specify) ……………………………………….

4. What could be your reason not to visit the natural reserve?
    A. Fear of possible dangers
    B. Fear of trying new experiences
    C. Lack of time
    D. Price
    E. Other (please specify) ………………………………….

5. How did you get to know about natural reserves and the wildlife in Senegal?
  A. Advertisement/promotional material (leaflet, billboard, internet etc.)
  B. Recommendation by local person
  C. Recommendation from a friend, family, other tourists
  D. Recommendation/offer by hotel, restaurant, tour guide
  E. Other (please specify) ………………………………….

6. Are you satisfied with the information provided to you about Senegalese wildlife?
  A. Strongly satisfied
  B. Satisfied
  C. Neutral
  D. Not satisfied
  E. Strongly unsatisfied

7. In case not, what information is missing?
……………………………………….…………………………

8. Would you be willing to pay additional fees to have more information about tourism in natural reserves (book, more competent guides etc.)?
  A. Yes
  B. No (please continue with question n. 10)

9. How much would you be willing to pay to have more accurate information?
  A. 1-4 USD
  B. 5-10 USD
  C. 11-20 USD
  D. 21-30 USD
  E. 31-40 USD
  F. More than 41 USD

10. Gender
  A. Male   B. Female

11. Age
  A. under 18 years
  B. 19-29
  C. 30-39
  D. 40-49
  E. 50-59
  F. 60 and above

12. Marital status
  A. Married
  B. Single

13. Children
    A. 0
    B. 1
    C. 2
    D. >2

14. Did you come with your family?
    A. Yes
    B. No

15. Education
    A. Primary school
    B. High school
    C. University
    D. Post graduate

16. Religion
    A. Buddhist
    B. Christian
    C. Jew
    D. Muslim
    E. Atheist/Agnostic
    F. Other: please specify

17. How long did you stay in Senegal?
    A. Less than one week
    B. One week
    C. 2-3 weeks
    D. 1-3 months
    E. More than 3 months

18. How long do you plan to stay in Senegal?
    A. Less than one week
    B. One week
    C. 2-3 weeks
    D. 1-3 months
    E. More than 3 months

19. In which country do you live?

…………………………………………..

Thank you very much for your support!

Appendix II: Photos from the natural reserve