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Social and environmental impacts of free port and mass tourism models on a small island: the case of San Andrés, Colombia

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Master of Science in International Environmental Studies

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Declaration

I, Juan Diego Ayala, declare that this thesis is a result of my research investigations and findings. Sources of information other than my own have been acknowledged and a reference list has been appended. This work has not been previously submitted to any other university for award of any type of academic degree.

Signature………………………………….

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Abstract

Tourism-driven development economic models have shaped the Caribbean region since the 1950s, generating major transformations as a result of the implementation of neo-liberal approaches to the territories. The archipelago of San Andrés, Providencia y Santa Catalina, has not been an exception to these phenomena. In particular, San Andrés Island has experienced a process of Colombianization, imposed economic development models, and population growth with serious implications for the local communities and the environment. This study investigated how the free port and mass tourism models for economic development have influenced the socio-economic realities of the island's inhabitants and impacted the environmental conditions of San Andrés. 63 semi-structured interviews and extensive field observations were conducted. The study explored concepts of overpopulation and resource scarcity, neo-liberalism, neo-colonialism, land grabbing, and marginalization to illuminate the different roles of tourism and resident communities in relation to urbanization, infrastructure systems, population growth, and changes in landscape and land tenure. Large-scale changes have occurred in San Andrés in the last 60 years as a result of the implementation of the free port and mass tourism models. Major infrastructure projects, extensive urbanization and tourism infrastructure, and migration-driven population growth have caused substantial environmental degradation across the island. Events of land grabbing and displacements, unequal opportunities of access to drinking water, in combination with unsustainable tourism practices which generate significant pressure on the island's resources and ecosystems and trigger conflicts with local inhabitants, have determined the marginalization of part of the Raizal and Continental societies. The economic dependence on tourism portrays a scenario of increasing vulnerability for excluded islanders that have abandoned traditional livelihoods to seek for a better future by joining tourism activities, becoming entirely dependent on the ever-growing tourism. The Colombianization of San Andrés, the free port and the mass tourism model are clear examples of neo-colonial approaches to a territory that shift the power from the local level to transfer it to external, more powerful actors. In an island that depends on the revenues generated by tourism, the uncertainty of the future due to climate change and global processes, require new forms of tourism, territorial planning, and diversification of livelihoods, which should give local communities of San Andrés adequate frameworks and tools to face future changes.

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1. Introduction.

In the past six decades, mas tourism has become one of the main driving forces in small island States in the Caribbean Ocean (Sealy, 2018). The Caribbean region has a long history of mass exploitation, rooted in colonial approaches to the territories, extractive economic models, and subjugation and enslavement of indigenous communities, that shaped the current realities of these countries (Williams, 2012). Despite the fact that tourism generates 800.000 jobs in the Caribbean region, it can also be said that this industry generates structures that demand large numbers of unskilled workers, produces seasonal employment, and relies on rigid markets with the principal aim of serving external interests instead of local (Sealy, 2018).

The island of San Andrés, although having become a part of Colombia, could easily fall in the category of a small island developing country, as it has suffered from similar processes of appropriation by external forces along its history, with clear consequences for the local communities and environmental conditions.

1.1 Geography and topography of San Andrés.

The archipelago of San Andrés, Providencia y Santa Catalina, is a system of islands and atolls under the Republic of Colombia, located in the southwestern Caribbean Ocean, off the coast of Nicaragua (CORALINA-INVEMAR, 2012). It consists of three main inhabited islands and a series of small cays at approximately 800km northwest of the Colombian coast, and 150 km east of Nicaragua (Howard et al., 2003).

San Andrés is the most populated and developed of the inhabited islands of the archipelago, with an officially stated population of around 61.000, as well as being the biggest of the three, covering 27 km² with an elongated shape of 12,5 km from north to south, a maximum of 3 km wide, and a maximum elevation of 87 MSL (CORALINA-INVEMAR, 2012; Howard et al., 2003). The island is surrounded by a coral reef formation that is 18 km long and 10 km wide, which forms a large bay on the north-east side of the island with an average depth of 4 meters (Geister, 1973; INVEMAR, 1996).

San Andrés has three main morphological components i) beaches, cliff coastline, and mangrove forests, ii) fossil reef emerged platform and, iii) central hilly formations. (CORALINA-INVEMAR, 2012). Beaches represent only around 2% of the total shoreline, the emerged

platform is almost flat with a gentle slope from 0 MSL to 10 MSL, and the hilly formation presents steep walls from the center to the north of the island, and an inundation valley in the center (Vargas Cuervo, 2004). The last two formations correspond to the San Luis Formation from the Pliocene, and the San Andrés formation from the Miocene (CORALINA-INVEMAR, 2012).
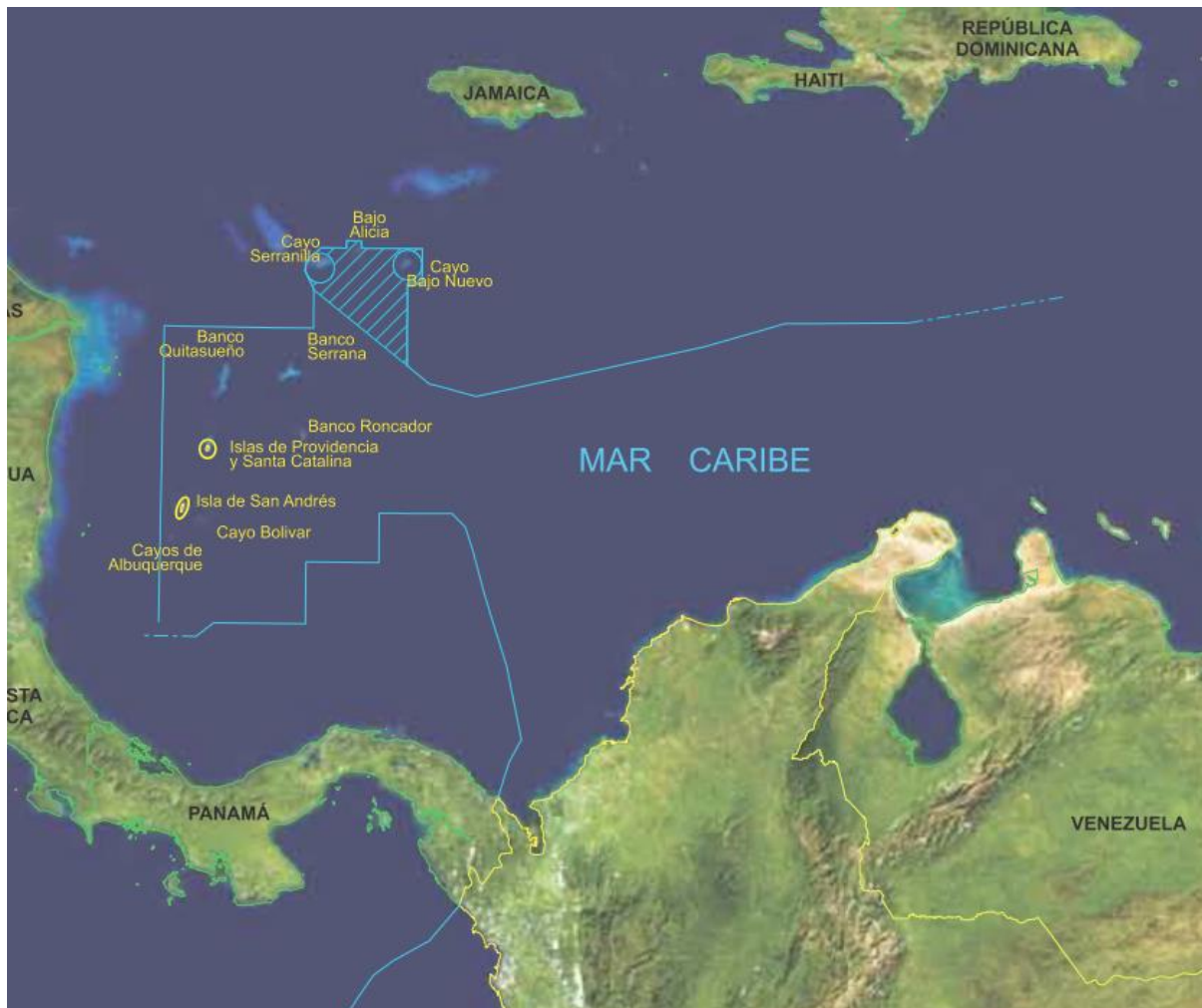
Figure 1: *Map of the archipelago of San Andres, Providencia y Santa Catalina, showing limits before the IJC ruling of 2012. Adapted from CORALINA-INVEMAR (2012)*

The island can be divided in two zones, rural and urban. The urban part encompasses the north of the island, commonly known as *North End*, characterized by holding a high density of buildings, consolidated roads and neighborhoods, and most of tourism and commerce infrastructure facilities. In contrast, the rural area, is composed of a diffuse distribution of settlements along the few existent roads, and all the remaining natural landscape and agricultural areas. (CDM Smith INC, 2016).

Figure 2: *Urban and Rural areas of San Andrés. Adapted from CDM Smith INC. (2016)*

Figure 3: *Satellite map of San Andrés showing relevant sectors. Source, Google Earth.*

1.2 Ecology and livelihoods in San Andrés.

The forest cover of San Andrés is characterized by a combination of sub-tropical forest and dry forest, given the special conditions of the archipelago as a result of being close to the coasts of Nicaragua (Herrera Rodriguez, 2016). The high levels of anthropogenic intervention have resulted in the sub-tropical forest having disappeared and being replaced with pastures and successive vegetation, reducing the forest mass to a fragmented set of small patches (Herrera

Rodriguez, 2016). Along the shoreline, the vegetation is adapted to survive the action of wind and the higher salinity of the soil, constituting transition zones between the sea and the main forest areas, which in some parts of the island are protected by mangrove forests. (CORALINA-INVEMAR, 2012). These transition zones, in combination with the coral reefs and fossil reefs, protect the island against strong winds and coastal erosion, provide shelter for migratory birds and stabilize the beaches used for marine turtles as nesting areas (CORALINA-INVEMAR, 2012). Representatives of animal biodiversity of San Andrés includes the black crab (*Gecarcinus ruricola*), two endemic reptile species, 98 bird species and 273 identified fish species. The black crab is one of the most important species on the island, with high value for the local gastronomy and culture. It inhabits the forest areas and goes out to the ocean once a year to breed, generating a massive migration phenomenon (CORALINA-INVEMAR, 2012).

Perhaps the most important habitats of San Andrés are the marine ecosystems around the coast. The island's coral reefs are considered some of the healthiest in the Caribbean Ocean, and include l5 km of coral reef barrier, fringing reefs, lagoons, seagrasses and mangrove forests (Howard et al., 2003). Coral reefs of San Andrés are well adapted to the effects of strong currents and winds, since the island's particular exposure results in continuous impacts of high swells (Diaz & Geister, 1996). The reef barriers of San Andrés are especially rich in soft corals, and contain important benthic fauna, such as the conch (*Lobatus gigas*), spiny lobster (*Panulirus argus*), which have economic and traditional importance for the local livelihoods (CORALINA-INVEMAR, 2012).

However, As a result of anthropogenic pressure on the landscape due to deforestation, urban expansion, population growth, and introduction of alien species, the biodiversity of the island has been reduced significantly in the last 50 years, raising red flags among environmentalists concerning the future of the island's ecosystems, which eventually contributed to the creation of CORALINA and the Seaflower Biosphere Reserve (Herrera Rodriguez, 2016)

In current times, the livelihoods of local inhabitants are largely connected to the tourism sector. 46% of the jobs in San Andrés belong to hotels, commerce, and restaurants. (CDM Smith INC, 2016). Other important activities include transport and communications, social services, and public administration, whereas traditional livelihoods such as small scale fisheries and agriculture are in decline and now represent less than 4% of the jobs (Universidad Nacional de Colombia, 2009).

Fisheries and agriculture, however, are extremely important for local livelihoods since they can contribute to food security of the population. Fisheries in San Andrés exist in the form of small-scale, artisanal fisheries organized as cooperatives, distributed around the island (CORALINA-INVEMAR, 2012). In the past, there were industrial fisheries for conch and spiny lobster, but overfishing of these resources resulted in the decline of populations. However, conch and lobster are still important for local livelihoods, and some small-scale fishers still capture them from the more distant fishing banks and cays. The main species targeted by fishers are red snapper (*Lutjanus campechanus*), bonito (*Thunnus alalunga*), kingfish (*Scomberomorus cavalla*), grouper (*Polyprion americanus*), and jack (*Caranx hippos*) (CORALINA-INVEMAR, 2012). These species are fished using only low technology equipment, mainly hook and line.

Traditional agriculture is extensive, organic and with no major technology involved, consisting of small-scale farms and subsistence agriculture. The most common species produced are those that do not need artificial irrigation, usually perennial trees and roots, such as mango, fruta de pan (*Artocarpus*), ñame (*Dioscorea*), cassava, and plantain.

1.3 Historical development of San Andrés.

In 1631 with the arrival of the Seaflower to the island of Providence, begins the puritan occupation of the archipelago. The first inhabitants of San Andrés were people who had escaped from the prosecution of the Anglican church, which had created a trading company in the Caribbean to develop commerce in the region (Herrera Rodriguez, 2016). Soon, the archipelago would become an important port for pirates and slave traders who brought the first waves of slaves from other parts of Central America for a period that would last until 1667 when the archipelago was abandoned after 30 years of territorial conflicts between Spain and Great Britain, and then remained forgotten for almost a century (Herrera Rodriguez, 2016). From 1730 onwards there was a process of re-discovery of the archipelago by anglophone people, introducing a slavery system that developed cotton agriculture as the main economic model, until its collapse in 1853. The collapse of the cotton economy resulted from the end of slavery in the archipelago, an event that changed the land tenure in favor of the new free inhabitants, who substituted the cotton production with the coconut-export economy, as the demand for the product was increasing in the area (Herrera Rodriguez, 2016; Meisel Roca, 2003).

According to Meisel Roca (2003), from 1730 until 1783, the archipelago had been under Spanish domain, but the country had exerted almost no influence over the territory, and had allowed the local inhabitants to remain in the archipelago in exchange for their loyalty. In 1822 after the declaration of the Colombian independence, San Andrés y Providencia joined the new Republic of Colombia as part of the Bolivar Department until 1912 when the national intendency of San Andrés y Providencia was created (Herrera Rodriguez, 2016; Meisel Roca, 2003).

The descendants of the freed slaves and the British citizens who remained in the archipelago, formed the community today known as the *Raizals*, an indigenous community originally from the archipelago, recognized by the Colombian constitution of 1991. However, most Raizals usually consider that they have historically had a closer relationship with people from the Caribbean region than with Colombia. In fact, islanders share ethnic and cultural origins with current or former British territories, such as Turks and Caicos, Cayman Islands, Jamaica or Barbados. These cultural roots are deep, as they have English and creole as mother languages, protestant religion, and similar traditions and costumes from British and Afro-Caribbean heritage. They usually referred to themselves as Caribbean people or *San Andrésanos,* instead of as *Colombianos.*

1.3.1 The Colombianization of San Andrés, the free-port, and mass tourism.

After the collapse of the coconut economy, followed an economic and social crisis in the archipelago, that resulted in Colombia increasing its influence over San Andrés in the early 1900s. Indeed, the Law 52 of 1912 created the Municipality of San Andrés and started a formal process of national appropriation of the archipelago. For example, article 14th requested to *"Authorize the Government to grant free tickets in national ships, to those families of four or more members who express desire to establish address in the Archipelago"* (Law 52, 1912). Furthermore, the Inter-Parliament Report (1936) already referred to the process of *'Colombianization'* when it assessed the state of development of SPSC:

"The Colombian cultural action is not effective and does not give the desired results, according to the educational systems and the school organization adopted [...] In terms of Colombianization, this is more easily obtained by bringing a considerable number of island children to the continent to distribute them in schools of the departmental capitals. It is also

true that this seems unfair, when the resources spent could be used efficiently to train the islanders as true Colombians."

The same document mentioned two issues that would be used as tools to *Colombianize* the islands in the XX Century and which influences continue in the present time. These are i) the free-port model, and ii) the tourism industry, as stated in the original text:

"The elimination of Customs will effectively contribute to the incorporation of the islands into the national economy, in a more or less remote future; but the psychological effect of the measure would be immediate, and the Colombian spirit will make itself felt in the islanders, creating in them a nationalistic sensibility that today they completely lack." Inter-Parliament Report *(1936)*

"Sanitation, comfort, attractions, information about Colombia, feverish activity of free ports; All this will result in a powerful avalanche of national and foreign tourists that will contribute to the glorification of the two beautiful Colombian islands." Inter-Parliament Report *(1936)*

The *Colombianization* of San Andrés first materialized with the creation of the free port by the Decree 2966bis (1953) and its formal regulation with the Law 127 (1959). Essentially, its implementation worked as a new stage of the ongoing Colombianization of the archipelago. Salas Betin (2015) explains that this process completely changed the economy of the island, producing a positive feedback loop of economic growth, migration, and tourism from mainland Colombia, that caused the complete transformation of the character of San Andrés.

In the following decades, tourism in San Andrés became massive, following the same phenomenon as in other islands across the Caribbean Sea (Wong, 2015). In 1991 as a result of the liberalization of the Colombian economy, the free port of San Andrés collapsed, as it was cheaper for people to buy imported goods directly from the mainland, and therefore the type of tourism in the island shifted from rich tourists, to middle class leisure travelers who seek for sun and beach (Meisel Roca, 2003). The latter is the model of tourism San Andrés is characterized by in current times.

1.3.2 Population growth in San Andrés.

During the late 1950s, a phenomenon of high population growth rates started in San Andrés in correlation with the launching of the free port, which attracted a large number of workers and investors to participate in the new economy. Meisel Roca (2003), argues that the increase in

frequency of commercial flights between Colombia and San Andrés, and the early tourism activity linked to the free port, triggered a demographic explosion, with an increase in numbers of inhabitants from 3.705 in 1951, to 14.413 in 1964, which constitutes a 3.89-fold increase. This tendency continued in the following decades, generating discontent within the Raizal community, whose members considered it would lead to the overpopulation of the island, with negative consequences for the communities and the environment.

With the modification of the Colombian Constitution in 1991, fundamental rights and protection were granted to the Raizal community through their recognition as one of the ethnic minorities of the country, and specific instructions to address the population growth problem (Constitución Política de Colombia, 2015, art. 310). At the same time, the presidential decree nº 2762, considering that San Andrés *"has a high index of demographic density, which has made the development of human communities in the Islands difficult… that the natural and environmental resources of the Archipelago are in danger… that the accelerated migratory process to the Archipelago Department of San Andrés, Providencia and Santa Catalina is the main cause of the growth of its population"* (Presidencia de la República de Colombia, 1991), created the *'Residence Control and Circulation Office'* (OCCRE) whose main objective was to regulate the immigration of people, through the use legal instruments to grant temporary or permanent residence permits, and provide the means to deport illegal residents. The decree enforced a '*tourism card'* (a tax) paid by tourists to be admitted in the archipelago for a limited stay.

1.4 The Seaflower Biosphere Reserve.

According to (UNESCO, n/a) Biosphere Reserves are *"'learning places for sustainable development'. They are sites for testing interdisciplinary approaches to understanding and managing changes and interactions between social and ecological systems, including conflict prevention and management of biodiversity. They are places that provide local solutions to global challenges. Biosphere reserves include terrestrial, marine and coastal ecosystems. Each site promotes solutions reconciling the conservation of biodiversity with its sustainable use."*

As a result of the processes of colombianization, the implementation of the free port, the emergence of mass tourism, and the social and environmental negative effects produced by these, the Raizal community began to shape the first ideas of a conservation plan for the archipelago (Universidad Nacional de Colombia, 2009). After the creation of the Ministry of

Environment of the Republic of Colombia, the insular territories of the country were declared Biosphere Reserve at the national level in 1993, and the same year the Corporation For Sustainable Development of the archipelago of San Andrés, Providencia y Santa Catalina (CORALINA) was created as a decentralized agency for the management of the Biosphere Reserve (Universidad Nacional de Colombia, 2009). The first objective of CORALINA was to achieve the declaration of the Biosphere Reserve as officially recognized by UNESCO, something that was finally achieved in the year 2000 (CORALINA-INVEMAR, 2012; Mow et al., 2003).

The Seaflower Biosphere Reserve encompasses an area of 300.000 km² that includes the totality of the archipelago of San Andres, Providencia y Santa Catalina, as well as a Marine Protected Area, The Seaflower MPA, which was created with a community-based, participative approach, in order to address some of the anthropogenic impacts on the marine biodiversity (CORALINA-INVEMAR, 2012; Mow et al., 2007).

Figure 4: *Map of the Seaflower Biosphere Reserve. Rectangles in yellow show the sections north, center, and south of the Seaflower MPA. Adapted from CORALINA-INVEMAR (2012)*

However, most of the concerns that led to the creation of the Reserve, are still valid more than 20 years after its officialization. Mass tourism, population growth, deforestation, urbanization, and climate change, are some of the processes that threaten the biodiversity and the livelihoods of thousands of people who are part of Seaflower. Moreover, external conflicts in the last decade, resulted that in 2012, the International Court of Justice recognized sovereignty of Nicaragua over 76.000 km² of the Seaflower Biosphere Reserve (Randin, 2015), putting its future at stake.

2. Methodology.

In this chapter, I will present the methodology I have selected to carry out the study. First, I will outline the research approach and design of the study, followed by the methods for data collection and analysis. Then, I will mention some ethical considerations I regard important. Finally, I will present the research questions and objectives.

2.1 Research approach and design.

In order to follow the objectives and provide answers to the research questions, I have chosen a qualitative methodology, which I find useful for the study. Bryman (2012, pp. 35-36) argues that qualitative research *"emphasizes words rather than quantification in the collection and analysis of data"*, a description that fits the purpose of the study to account for human testimonies of how different situations influence the communities involved. This goes in the same direction with (Berg & Lune, 2017, pp. 12, 15), who argue that *"qualitative research, thus, refers to the meanings, concepts, definitions, characteristics, metaphors, symbols, and descriptions of things"* and *"properly seeks answers by examining various social settings and the groups or individuals who inhabit these settings."* Therefore, qualitative research seems to be the appropriate approach to address social aspects of communities which are not suitable for quantitative measurement.

Additionally, I have decided to use quantitative data for a small part of the study, to be used as descriptive statistics which augment understanding the setting and complement the qualitative data collected. This does not imply a quantitative research approach, as the data is only meant to support the inductive approach on which the study is based. The inductive approach has as main goal the use of findings to build theory on a certain matter (Bryman, 2012, pp. 24-25).

The case study design:

According to (Bryman, 2012, p. 46) *"a research design provides a framework for the collection and analysis of data."* The design is therefore part of the strategies used in order to produce evidence that help the researcher to answer the research questions and address the objectives of the study (Bryman, 2012, pp. 45-46). I have chosen the case study as a strategy to analyze historical and current conflicts of a specific community over time regarding some particular phenomena. Yin (2018, p. 50) characterizes a case study as *"an empirical method that investigates a contemporary phenomenon (the "case") in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident."* The case study constitutes *"an object of interest in its own right, and the researcher aims to provide an in-depth elucidation of it."* Hence, the characteristics of the case render it as an indivisible unit with a unique context and features that make it interesting and relevant for the purpose of the study.

Reliability and Validity:

Reliability and validity are the main criteria to evaluate results in social research (Bryman, 2012, p. 46). The concept of reliability is related to the potential of the results of a study to be replicated (Bryman, 2012, p. 46). However, while replicability is common in quantitative research, provided through stable and precise measures, in qualitative research, data is not always suitable to be measured in such stable way, becoming replicability difficult to establish (Bryman, 2012, pp. 46-47, 389-390). The case study constitutes an example of research difficult to replicate, as it is very context-specific and therefore it is hard to find the same results in a different place. Therefore, to provide trustworthiness, I rely upon the concept of dependability, outlined by (Bryman, 2012, pp. 392) as *"auditing approach"*. In order to do that, I tried to be consistent in my methods, by proceeding in a systematic way in each case of data collection, and by keeping records of data, questionnaires, audio records and transcripts of interviews.

Validity is *"concerned with the integrity of the conclusions that are generated from a piece of research." (Bryman, 2012, p. 47).* It refers to whether results obtained can be generalized. This is also hard to address with a case study design, since the settings analyzed may be difficult to

replicate at larger scales, and the sample size may not be representative of the population in a statistically significant way that allows to suggest the results can be generalized. Moreover, the complexity of the reality of societies and the multiplicity of layers and interrelations between human beings become difficult to account for all the possible angles of the setting, which may limit the results to the sample analyzed. The generalization of findings to larger scales has not been the intention of this study. However, I intend to provide in-depth information regarding specific conflicts and changes within the communities involved in the case study, and testimonies of the people involved in order to address the issues outlined in my research objectives, which might be valid or not for larger or different context.

2.2 Methods for data collection and fieldwork.

Departing from the qualitative approach, and based on a case study design, I decided to structure my study based on interviews carried out in the field. The selected study area is the San Andrés Island, part of the San Andrés, Providence, and Santa Catalina archipelago, from the Republic of Colombia, located in southeastern Caribbean Ocean. The data collection took place between March 1st, 2021, and April 9th, 2021. The population considered in order to analyze the conflicts outlined in the introduction chapter, are the Raizal and Continental communities that inhabit the island, both those who have been and have not been born in the archipelago, and tourists that were in the island on that moment or had been there in the previous 6 months. I describe the sampling strategies and methods for data collection, and summarize the challenges presented during the process.

Sampling strategy:

"The logic of using a sample of subjects is to make inferences about some larger population from a smaller one—the sample." (Berg & Lune, 2017, p. 38). I have chosen to use a non-probabilistic, purposive approach for this study in order to the sampling to be *"conducted with reference to the goals of the research, so that units of analysis are selected in terms of criteria that will allow the research questions to be answered"* (Bryman, 2012, p. 418). With purposive sampling, I intend to achieve enough variety in the sample, with different characteristics that are relevant for the objectives of the study, although knowing that this sampling strategy does not allow the possibility of generalization to a population (Bryman, 2012, p. 419).

I have utilized a combination of snowball and opportunistic sampling techniques because these fit the way human relations are produced in the selected setting. Snowball consists in sampling a small number of people, who will then suggest other participants relevant to the research, whereas opportunistic sampling consists on collecting data from participants that were not originally considered but may provide useful data. (Bryman, 2012, pp. 419, 424). These techniques have proven to be useful to get access to key informants and construct a network that links all the different samples, contributing to a correct triangulation of data. Moreover, snowball and opportunistic sampling have been of great help given the limited time available for the data collection in the field.

In order to carry out the sampling procedure, I took advantage of some facts that gave me a starting point and simplified much of the following process. First, I know San Andrés from a previous visit, and therefore had premonitions about where to go to sample for data that I considered necessary. Second, I knew people from the island, who provided me with useful information that I used to select units of interest. And third, I had established contact with a representative of the Raizal community who agreed on collaborating with my study by recommending some key informants to start my snowball sampling.

I spent the first five days surveying the field to identify potentially relevant places to connect with people. Based on the first information I was provided with what I saw, and what I already knew, I decided to sample in two levels. The first level is context, for which I selected the sectors *North End, La Loma,* and *San Luis* as main desired, and *El Cove* and *South End* to be sampled if I had enough time. The second level is sampling of people, for which I selected to sample participants from the Raizal and Continental communities, fishers, tourism operators, hotel managers, researchers, professionals, and institution representatives. Sampling presented different challenges that I will summarize later in this section, but in general had to do with the fact that limits between samples were difficult to determine.

Overall, I carried out 54 interviews with inhabitants of the island, from which 29 interviewees self-identified within the Raizal community and 25 within the Continental community. From the total, 35 were men and nineteen were women. The difference in gender balance resulted from the fact that the ten fishers interviewed were men, as I could not find women working as fishers. Sampling included nine institution representatives (which included two ex-departmental governors, members of CORALINA, the Chamber of Commerce, and the Secretary of Culture of the department), eight external consultants, from both communities, as

well as eight tourism operators. I did not sample hotel managers, being that one of the challenges I will describe later. Samples from the different groups were set to have at least between eight and ten units, to allow the triangulation of the information obtained.

I have also sampled tourists as part of the study, and for that purpose I have used two different strategies to obtain data. For the first sample, the goal was to get between eight and ten tourists to conduct interviews. In order to do it, I used a convenience sampling strategy, because it was more practical to obtain access to people who were available at any given moment. *"A convenience sample is one that is simply available to the researcher by virtue of its accessibility"* (Bryman, 2012, pp. 201). Sampling tourists represented substantial challenges. However, I managed to get nine participants. For the second sample, I used a quantitative online survey, not with the intention to conduct a quantitative analysis, but to collect some data that would allow me to contextualize and characterize some aspects of the tourist population. Although I wanted to release a survey using a probabilistic, random sampling strategy, due to time constraints and practicalities, I chose a non-probabilistic, purposive strategy based on convenience, and released a survey with 44 questions, distributed in two Facebook groups, and among some tourists via SMS. In total, I collected 65 answers.

Data collection methods:

Semi structured interviews:

In a semi-structured interview, the open-ended nature of questions give the interviewees more flexibility to expand their thoughts, usually resulting in in-depth explanations of events, perceptions, and behavior (Bryman, 2012, p. 471). The flexibility of semi-structured interviews is not only due to the degree of freedom of the interviewee to answer, but also gives the researcher the opportunity to pursue relevant topics that may arise spontaneously from the respondent's statements, which may enrich the data collected. (Berg & Lune, 2017, p. 70). One thing that Berg and Lune (2017, pp. 69-70) underline is that it may be necessary to slightly change language and ways of asking questions to adjust to the context of the interview and the interviewee, in order to facilitate the correct understanding of what is asked. I found the semi-structured interviews method appropriate, since it matched the casual communication that usually happens on site, and because it allowed interviewees to express how they understand the world around them (Bryman, 2012, p. 471).

In total, five types of semi-structured interviews were carried out, based on the different backgrounds of the interviewees. I developed different interview guides for local representatives of local communities, fishers, researchers/professionals and institution representatives, tourists, and tourism operators. Questionnaires for local communities aim to collect data about the perceived environmental and social conflicts, their causes and consequences, historical changes, and views of interviewees regarding conflicts between the communities. For researchers and institution representatives, questions had the purpose of obtaining a professional and institutional perspective of these issues, and as a way to support or contradict what interviewees from the two communities reported. The questionnaires for fishers and tourism operators included similar questions than for the representatives of communities, but also questions about their particular habits, perceptions, opinions, and conflicts related to their livelihoods. For tourists, the goal was to obtain information about behavior, habits, interests, activities done during their stay, and knowledge of the site, in order to characterize the tourist population that visit the island.

All 63 interviews were carried out upon availability of participants. All the interviews were carried almost entirely in Spanish in order for me to understand without misinterpretations, since Spanish is my mother language. However, some Interviewees felt more comfortable speaking English, therefore for some interviews, that was the language spoken. Although I had access to a proper office to carry out the interviews, the dynamic of the site itself did not allow me that possibility. Instead, I had to constantly move to different locations and carry out the interviews in places that were convenient for the interviewees. Interviews were designed to last approximately 30 to 40 minutes. People turned out to be highly involved with the topics and willing to participate, and given how warm and talkative communities in Latin America often are, most interviews ended up lasting more than one hour. Interviewees also served as door openers who introduced me to other people that turned out to be relevant for the study. At the beginning this raised a few red flags, although I knew I was using a snowball strategy, because I feared that I could be led to collect biased data that followed a marked agenda, especially within the Raizal community. Therefore, I also tried to make my own connections simply by trying to merge with the community. Fortunately, using this strategy, guided me to the same people and places I was sent to by interviewees, indicating that I was going somewhat in the right direction when selecting samples.

The interview process presented some challenges, since most of the interviews had to take place in open environments, exposed to sounds, elements, and other people. During interviews,

any of these would interrupt the process, resulting in interviewees forgetting ideas, changing topics or angles of certain answers. Other people turned out to be a key problem, especially when interviewing representatives of local communities and fishers. In many cases, people would approach to listen what was being said and sometimes even try to participate by suggesting answers. This is a result of the context in which the interviews were carried out in households. I tried to handle this in the best way possible by pausing the interviews while tried to explain about the individual character of the interviews so that no external observer would influence the answers. However, three of the interviews were inevitably carried out with two people, although I had not planned to conduct group interviews. Similar was the case for tourists, since interviews were usually carried out in public places, and because tourists were often in couples or groups.

Field observations:

I did not carry out any systematic field observation of the interviewees, even though it was a possibility, due to constraints of time and availability of interviewees. However, I did observe interviewees' behavior and attitudes during interviews, in ways that allowed me to weigh their answers and assess their relevance. Bryman (2012, p. 382) argues that *"qualitative researchers are frequently interested not just in what people say but also in the way that they say it"*. Some interviewees, for instance, would become really emotional during the interviews, while others would clearly repeat a narrative without caring much. In addition, I spent time with the local communities, fishers, and different groups of tourists, as wells as participating in most of the key tourism activities mentioned as relevant for the environmental and social issues in San Andrés. I was therefore able to observe how people live, as well as their behaviors, attitudes, and interaction with people of different social groups and between them and the physical setting. In this way, I was able to comprehend some aspects of the daily life that allowed me to gain a better understanding of social conflicts and environmental problems, especially by observing behaviors that were later compared with the statements of interviewees.

Secondary sources:

This study is mostly based on primary data collected. However, secondary sources were also a useful tool to support interviews. I relied on grey literature, such as newspapers and local publications, to corroborate and contextualize some of the information obtained in interviews. I also used previous studies which have analyzed San Andrés in various ways, both physically and ethnographically, from where I obtained maps that were useful to support much of the data

collected. Finally, I used multiple data sets from official public sources, and also from media reports to build some figures of population growth trends in order to compare it with the statements of interviewees about that matter.

Audio recordings and notes:

Since I carried out all the interviews alone and did not possess much time to write down information after interviews, I heavily relied on audio recordings of interviews in order not to lose important details. For this purpose, I used an audio recorder and a backup cellphone, and generated transcripts once I got back from the field. The use of the audio recorder produced some problems in some cases. Bryman (2012, pp. 483-484) argues that the use of a recorder may produce self-consciousness of interviewees, who may become shy at the moment of speaking, or afraid to the audio being used against them afterwards. The result is that people may refuse to give interviews or that the data collected may not be as interesting as expected. These are situations I encountered on some occasions. Some people rejected to be interviewed because they were concerned that I was an undercover police officer or informant, not because they were doing something illegal, but considering that some places are frequented by people with shady business, potential participants did not want to get in trouble in case they were to be seen answering questions and being recorded. Some interviewees were visibly uncomfortable knowing they were being recorded. To correct this, some interviewees agreed to the recorder being put on a side or covered, while they focused only on the conversation. I almost did not use note taking as a tool, since I felt the visual communication with interviewees was more important, and participants adopted a relaxed attitude when they knew they were being heard. Taking many notes would have created an awkward atmosphere in a context in which looking into the eyes of people is so important.

Challenges for data collection and sampling errors:

Time and logistics:

I had originally planned to conduct 40 to 50 interviews distributed among the different sample categories, with the idea of getting at least ten interviewees from representatives of each community. However, I only spent 40 days in the field, and that number proved to be difficult to reach. In the end I achieved 63 interviews, but that meant sometimes I had to conduct three to five interviews in one day, whereas other days I had no interviews. What I had planned in

the beginning, to schedule interviews via text messages, turned out to be really difficult with some samples, due to different reasons, and some people cancelled or re-schedule the interviews several times. Something that was helpful, was to rent a motorbike, because I could move around the island with more freedom and reach people, no matter where they were at the time of the interview.

I completely underestimated how different people may act regarding time and compromises. I also did not take into consideration that most interviewees were available only during the afternoon, after work, or that they would not want to participate in interviews during the weekend. That meant I spend many afternoons interviewing people, while I missed the opportunity to interview fishers who are usually fishing during the day, land their products at midday, and are free in the afternoon. I calculate that I would have needed double the time to accommodate all the tasks that I did in 40 days, but unfortunately, because of the COVID-19 pandemic, the time frame available could not be increased.

Sampling errors and bias:

One of the biggest challenges to collect data in the field had to do with the fact that the Continental community is highly heterogeneous compared in general with the Raizal community. Thus, whereas it was relatively easy to sample Raizal people, sampling of the Continental community was extremely difficult. It was easy to get access to people who belonged to the working middle-class, but difficult to establish connections with the low-class people for different reasons. Perhaps I did not meet the right people, but I often came to dead ends when asked for people in the more marginalized areas, or when I requested help to take me to some places which I was recommended not to go alone. Moreover, the diversity of origins of the Continental population, give each social group its own characteristics and may have different types of conflicts. Another motive for which I could not access some layers of the Continental community were related to the fact that, in some occasions, I was requested payment in exchange for interviews, something that I had to decline several times, and which caused me some problems for refusing to 'collaborate'. Overall, I consider that there is a non-response error in the Continental community sample. According to Bryman (2012, p. 187) this error is produced when *"some members of the sample refuse to cooperate, cannot be contacted, or for some reason cannot supply the required data."* Even so, I try to compensate the non-response when I got access to fishers and tour operators who belonged to this community. However, the sample was not as strong as for the Raizal sample. Non-response was also a

problem when sampling tourists, simply due to the fact that people on vacations usually do not want to participate in anything time consuming, and just rejected the invitation. As a consequence, I could not get testimonies from some samples of the tourist group that I considered relevant. Similar was the case of hotel managers and CEOs, who do not live in the island, and were reluctant to participate in interviews, or impossible to reach neither in person, nor by phone.

Something that was especially challenging were the difficulties to establish clear differences between the different samples. The reality of the society is extremely complex and layered, often with people who belong to multiple layers and have many different roles. For example, I may sample one person from the Raizal community, who is also a fisher, but works as boat guide. Others could be local leaders, and also work for the government. Or Continentals who are married with Raizals, who are professionals, and may even be native to the site if they were born there. Therefore, it was difficult to separate roles when conducting interviews, because often people would tell their view of reality based on who they are as a whole. In consequence I had constantly to be prepared to identify the different perspectives interviewees assumed and consider asking questions meant for other samples.

In regard with the quantitative online survey for tourists, I had mentioned previously that it was not conceived to elaborate inferential statistics, but just to support the qualitative interviews with some numbers in order to characterize the population in general without generalizing. However, there were some aspects of how it was done that generated a selection bias that is important to mention. The most relevant, is that the survey was built in Spanish, and that automatically excluded all people who did not understand the language. This is important to mention because surely affected the representation of non-Latin-American international tourists. The second aspect is that the survey was distributed mainly via two Facebook groups meant to connect travelers interested in visiting the site. Therefore, only those who were in the group had access, which thereby excluded some people by age, social class, and those who do not use this social network.

Finally, I have to mention two issues of gender bias that were difficult to avoid. The first one is that the fisher sample is formed 100% by men, since there are almost no fisherwomen in the site, and I was unable to contact any of the few who existed. The second concern interviews of both tourists and the online survey, as between 80 and 90% of the interviewees and respondents were women. I cannot find an explanation for this, but I suspect from issues related to sexism,

which is still a big problem in Latin America, resulting in men not being interested in collaborating with something that does not fit with their idea of 'man'.

2.3 Analysis.

I draw on the theory outlined in the introduction to analyze the collected data. In addition, I rely on selected direct quotes to support my findings, since a large part of this study is based upon peoples' perceptions, opinions, and perspectives on related issues that arose from the qualitative interviews. Direct quotes clarify peoples' feelings and record accurately how they expressed their opinions literally.

To analyze interviews, I use a content analysis technique, by manually coding the interviews, by establishing categories and pattern in correlation with the research questions and objectives, and then codes that I consider relevant, such as, 'water', 'sewage', 'solid waste', 'environmental problems', 'land tenure', 'livelihoods', 'fishing', 'agriculture', 'tourism', 'hotels', 'traditions', 'culture', 'marginalization', 'exclusion', among others.

Finally, for the qualitative online survey, I used an online form, that automatically generates descriptive statistics of the dataset. This data was later used to generate simple charts, and to inform different aspects of tourists' behaviors, activities practiced, attitudes, knowledge, and opinions in the form of percentages.

2.4 Ethical considerations.

This study is largely based on data collected in the field from informants, who kindly agreed to participate in interviews, and it is therefore extremely important that I assure their confidentiality. San Andrés is a small place, and any information that involve personal data without the correspondent anonymization, could result in an easy identification of interviewees and may possibly cause them problems in future. I spent much time before each interview explaining the purpose of my study and how the interviews were to be carried out. Every interviewee received an informed consent sheet that they had to read, where I explained who I am, what I do and for which institution, my duties as researcher and the rights of participants. I also described carefully how the data was to be collected, handled, analyzed, and stored properly in a way that assured complete confidentiality of informants. Interviewees were asked to sign the form and write the date, but not to write their names, which were encrypted using a

software. Some participants who did not want to or could not sign the form, were asked to state their agreement with the terms and conditions of the interviews orally while being recorded, but without stating their names. I explained from the first moment that the audio recording of the interviews was completely necessary and asked for permission to record in all of the interviews. I answered all questions from informants when they had concerns about the study or my procedures as a researcher.

I did my best not to invade peoples' privacy or take up more time from informants than the necessary. I did not force people to participate or insisted after getting a negative answer, as participation in interviews was completely voluntary. In my role as a researcher, I could not offer anything in exchange for interviews, apart from witnessing what interviewees had to say about their realities. On some occasions, I was asked for money in exchange for interviews or informants names, which I instantly politely declined. Lastly, I conducted all my interviews with respect for the people who were participating, being extremely careful not to say something or ask questions that could be interpreted as offensive, aggressive, or hurtful for any of the interviewees.

2.5 Research questions and objectives

Main Research Question:

How have the free-port and mass-tourism models for economic development influenced the social, economic, and environmental conditions affecting local communities in San Andrés Island, in the context of the Seaflower Biosphere Reserve?

Sub-Research Questions:

a) What is the role of the free port and mass tourism models in population growth of San Andrés? What is the connection between population growth, claims of overpopulation, and neo-colonialism?

b) What are the past and current trends of urbanization and tourism infrastructure development in San Andrés? How does the free port and tourism infrastructure relate with social and environmental problems in San Andrés? What is the role of tourism?

c) How have the different development models influenced the livelihoods and culture of the Raizal and Continental (South America) communities? Is there any evidence of

marginalization of Raizals and Continentals, or is there improvement of their livelihoods as a result of economic developments in San Andrés?

Research objectives:

Objective 1: Describe the historical and current processes that contributed to population growth in San Andrés. Investigate the past and current population numbers, both local and floating, and projections for the future. Document the influences of increasing population in the local communities and their attitudes towards it.

Objective 2: Document the positive and negative effects of urbanization processes, tourism infrastructure, services and activities on the landscape, land use changes, and tenure of land of local communities. Collect data about urban and rural service infrastructure that may be affecting ecosystems and local communities. For instance, sewage systems, access to and availability of drinking water, solid waste management, coastal erosion, coastal infrastructure that may have re-shaped the shoreline, water transport, and tourist flows

Objective 3: Document the influences of the free port and the mass tourism models on the social, economic, and cultural dimensions of the Raizal and Continental communities, such as changes of livelihoods, culture, traditions, and customs. Collect data about potential negative effects, such as marginalization, cultural erosion, loss of traditions, and exclusion. Collect data about potential positive effects, such as economic progress, diversified livelihoods, conservation and promotion of local culture and traditions, enriching multiculturality, integration, and inclusion.

3. Results.

3.1 Landscape changes in San Andrés.

Since the mid-1950s to the current time, San Andrés has suffered from great changes in the landscape which continue to influence the ecology of the island and the socio-economic conditions of the local communities. A large portion of these changes have their origins in the implementation of the free port model from 1959 to 1991. In effect, interviewees mentioned the construction of the airport, the National Route N1, and the wharf to have markedly changed the characteristics of the island, forming the basis for what would later be the development of the tourism infrastructure.

The airport was the first major project, and according to many interviewees, was one of the first events that caused major changes in land tenure to the detriment of the Raizals communities. The scale of the project literally divided the island into two parts, leaving the northwest sector, known as *Sarie Bay*, practically disconnected from the rest of the island.

With the construction of the National Route 1, much of the coastline was destroyed, which caused irreversible changes, according to several interviewees. The road destroyed mangroves and lowlands in the south of the island and interrupted the tidal cycles and natural replenishments of the beach, producing coastal erosion phenomena that are visible today. In addition, its location so close to the coast has resulted in the road being highly vulnerable to strong storms and hurricanes. The National Route 1 constitutes an artificial border that interrupts the migration of the black crab (*Gecarcinus ruricola*), as they are blocked on their way to the sea by the defense walls, or due to the fact that sometimes they become victims of vehicles.

Interviewees also mentioned the construction of the wharf as a project that caused great damage to the ecosystems of the island. Several interviewees witnessed it at the time of its construction. They explained that the land for the wharf was completely reclaimed from the sea, which required major dredging of the seabed for its construction, as well as the use of explosives to demolish part of the coral reef to give space for the navigation canal, which then collapsed the coastal fisheries. Some interviewees commented that the sand extracted was used in the concrete for buildings and hotels. (For instance, see Archbold Nuñez & Mow, 2015; pp. 206-208, pp. 218-219).

The success of the free port, and the placement of San Andrés on the Colombian map resulted in the further growth of tourism, a phenomenon that still has consequences today. Increasing urban expansion, changes in the use and tenure of land, produce negative ecological impacts, such as deforestation and loss of biodiversity. There is also a steady increase in the demand for water resources, increased sewage pollution, garbage production, and great socio-cultural changes for local communities, related to the mass tourism model.

3.1.1 Tourism and commercial infrastructure expansion.

The expansion of tourism infrastructure has historically been more important in the North End area of San Andrés Island. Interviewees explained how these changes took place, and how they continue to expand not only in the north, but now also towards the south of the island.

Interviewees argued that the northern part of the island was chosen to install all the commercial and tourist equipment as part of the opening of the free port, through the expansion of the existing small urban center. This area is conveniently close to the airport, and provides quick access to Spratt Bight Beach, the main beach of San Andrés. Through processes of expropriation and privatization, the state and the private sector acquired land for construction of buildings for hotels, tax-free shops, and public institutions.

Some interviewees explained that much of the land where some of the most traditional hotels of San Andrés are located today, is land reclaimed from the sea through the use of sand dredged from seabed. They talked about the entire northeast tip of the island, the area that stretches from the *Old Point* mangrove to the *Café-Café* point and includes hotels such as the Sunrise and the Decameron Aquarium, which are located on the coast in places that did not exist in 1954. In addition to the environmental impact due to dredging of seabed and the destruction of coastal reefs, these modifications of the coast resulted in the complete privatization of the coastline in the northern part of the island, and the exclusion of Raizal families, who were forced to move to other parts of the island, usually towards the center and south.

Figure 5: *area reclaimed from the sea (green) in the service area of the Bay at North End. Adapted from Echeverry Hernández & Marriaga Rocha (2013).*

The change of character of *North End* is easily recognizable when walking around the area. The first line of buildings generally consists of hotels and commercial buildings, 4 to 8 stories high. This extends about 200 meters inland, and after that it gradually decreases in scale until it becomes a residential area. Some interviewees commented that the traditional native buildings consisted of houses made entirely of wood, often of two stories. They pointed out that today the wooden construction system tradition is completely lost, which resulted in San Andrés to have lost part of its identity as a Caribbean Island, which has been replaced with a modern, eclectic style of buildings made with bricks and concrete, of a larger scale in relation to the traditional houses. Many of the inhabitants ended up reforming the ground floor of their houses to use them as rental premises for the commercial sector and only the upper wooden part remains.

The densification and expansion processes of the tourist area continue to take place in *North End* today. In field observations I have verified the existence of several buildings under construction, to be used as hotels and private apartments. Many of these buildings are located on the few vacant lots near the coast, with heights that interviewees complained is higher than the allowed by the law.

The interviewees also highlighted that the proliferation of hotels and businesses is not the only cause of changes in San Andrés. The boom of massive tourism has triggered the demand for accommodation and property prices have skyrocketed. This attracts locals, Continentals, and foreign investors, who buy apartments and offer them in the rental real estate business. Many local inhabitants, both Raizal and Continental, rent out rooms for tourism or have converted their houses into lodges. The high demand for short term accommodation results in owners who prefer to rent their properties to tourists instead of local inhabitants since they can make a higher profit from international rental prices. Sometimes people even move away from the area to use their houses for rental. This creates a problem for younger generations, as they have difficulties to find places for rent due to the low availability and the high prices motivated by the tourism bubble.

Figure 6: *Comparison of satellite images of North End 2004-2021 (Source: Google Earth).*
Note: the comparison shows the new buildings along the shore, and the increase in transport vehicles

Figure 7: *New buildings on the shoreline, from the rectangle in figure 6. (Photographer: Juan Diego Ayala)*

However, the expansion of the tourism infrastructure does not occur only in the northern zone, nor are they exclusively related to buildings. Many interviewees suggested that the tourism sector is beginning to migrate to the south of the island in search of places with greater possibilities for development, generally in places of scenic interest, such as *Sound Bay, Rocky Cay* and *Cocoplum*. As some sectors become more sought after, hotels and lodges arrive, and with them restaurants, services, and new people, to settle in the area.

The great influx of tourists that has been taking place mainly during the last ten years, resulted in an increase in the number of tourist activities and services that have altered the coastline in a similar way to buildings. These consist mainly of piers and docks for the large number of transport boats that everyday take visitors to the nearby Keys or are used for water sports or diving. Boats have occupied a great portion of the bay of San Andrés, which is now almost completely transformed into a transport and service area. Some biologists whom I interviewed commented that the eastern side of the bay has been historically neglected for not being appealing to tourists compared to other parts of the island. Therefore, it has become a service and transport area. This has caused significant damage to the ecology of San Andrés by damaging the seagrasses that are important as nurseries for many marine species. They considered the bay around *Cotton Cay* as having become completely degraded.

Figure 8: *Tourism equipment (jet skis and boats) docked at the shore on the eastern bay (Photographer: Juan Diego Ayala).*

3.1.2 Urbanization processes and conversion of landscape.

The free port of San Andrés, and its associated infrastructures, produced the first displacement of people in the territory due to the privatization of lands and expropriations. Many Raizal families were forced to abandon their lands to seek a new place to settle.

Interviewees said that those who stayed in *North End* soon experienced great economic pressure to sell, and usually ended up subdividing their land in order to participate in the new economy that increased the cost of living. The result was the densification of the northern zone

that caused the disappearance of the traditional Raizal *patios*. Some interviewees explained that the *patios* (a backyard shared by several houses in the middle of the premise) were key for Raizal culture, important for social activities, production of staple food, tea and medicinal herbs, and collection of rainwater. In general, the *patios* were shared by several families. As land prices increased and due to the demand of the commercial and tourist sector, new constructions began to enclose and divide those patios, many of which were then occupied with buildings. Few of them remain today.

The growth of the hotel and commercial zone caused another associated phenomenon, according to several interviewees. The great migration of Colombians to San Andrés to work in trade and tourism, as well as in the construction of the necessary infrastructures for the free port, demanded new residential areas. To accommodate entire immigrant neighborhoods, many areas of mangroves and lowlands were filled, often using sand dredged from the sea or land removed from other parts of the island. These neighborhoods, such as *Barrio Obrero* and *Los Almendros*, have contributed to giving San Andrés a more Colombian appearance.

According to interviewees who have participated in land use planning and members of the CORALINA, the urban expansion of San Andrés currently exceeds the designated urban area, extending into the rural portion of the island, practically with no control or planning. This, they explain, is in part product of the historical issues in regard to land tenure, which is still very informal on the island. The usual practice for many people is to simply build in the rural area without the proper permission from the Government. In this way, displaced people from the north, immigrants, and younger generations of islanders, have extended the urban border diffusely along the main communication routes, especially in the center of the island. This process is slow and cumulative. According to some interviewees with experience in territorial planning, this has very simple mechanisms, consisting in general of people who build next to their parents' house, relatives who have arrived from the continent, and people who purchase or rent a piece of a larger plot to build their house. What these diffuse processes generate is the impossibility of efficiently providing public services, due to the lack of planning, and because the expansion is extensive and ramified across the island, which requires greater investments than the process of densification in a compact area.
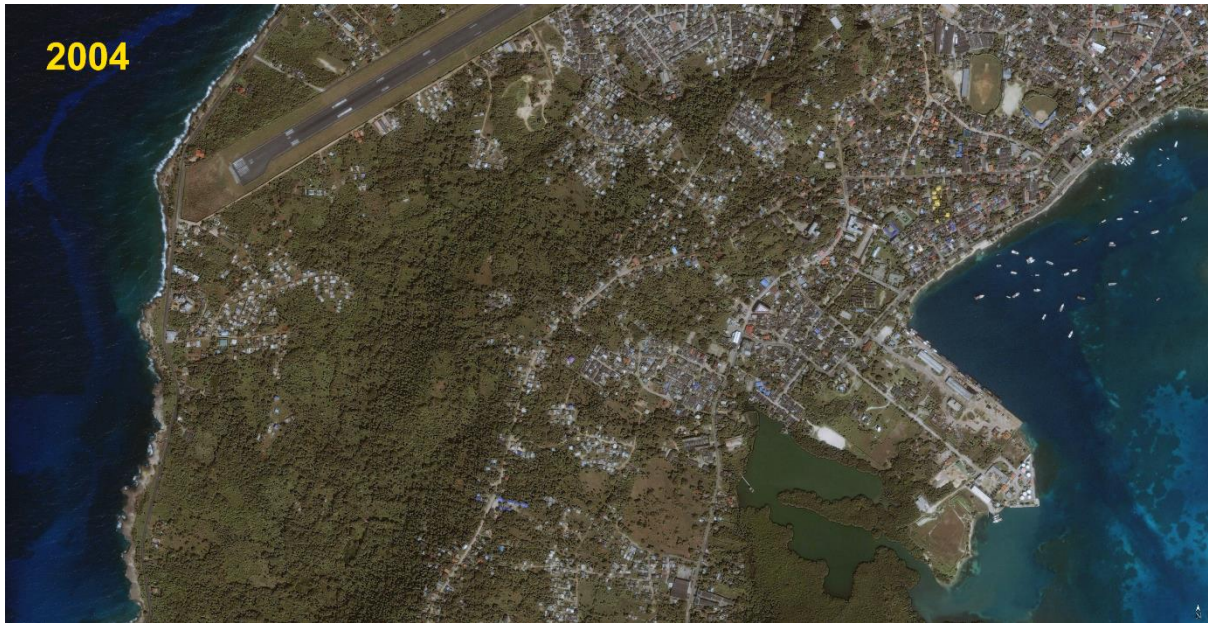
Figure 9: *Satellite image from 2004 of the limit between urban and rural area (Source: Google Earth)*

Figure 10: *Comparison of satellite pictures from 2004 and 2021. The pictures show the diffuse urban expansion in the rural areas of Morris Landing, and in the perimeter of the urban area, gradually replacing the green areas. (Source: Google Earth).*

Some interviewees were also concerned because they see that areas of importance for tourism in the east side and lately the south and west of the island are attracting a large number of small hotels and lodges. These are generating the appearance of tourism poles that generate job opportunities and, therefore, these areas are experiencing an increase in the number of houses as people seek to be closer to their source of work, but in a rather irregular and unplanned way.

Some of them open restaurants, small bars or have some participation in tourism activities and accommodation.

The urban expansion in the rural sector was characterized by CORALINA representatives as concerning. One of the main reasons is the widespread deforestation caused by housing projects. As this occurs in a diffuse way, it is very difficult to control. They highlighted that the forests of the island are heavily threatened due to urban expansion, tourism infrastructure, and agricultural practices performed in a rudimentary and extensive way. Some Raizal interviewees also observed the combination of these processes threatening the habitat of the black crab, important as food source and for local livelihoods. The disappearance of its habitat and the increased pressure on the resource by the growing rural population is causing a noticeable decrease in the population of crabs, which lives in the interior of the island and migrates to the ocean once a year to breed. The habit of fencing the land also prevents them from moving on their way to the sea.

The diffuse and progressive expansion of urban areas exposes the limitations of public service infrastructures on the island. An interviewee who participated as a consultant for territorial planning in San Andrés, commented that the extensive, uncontrolled urbanization causes a great dispersion of households in a way that makes it difficult supply them with water service because the design and extension of the network are not always viable from an economic and logistics perspective. Similar is the case of the sewage system, which does not exist in the rural area. The interviewee also explained that it is easier to provide an area with services when it is compact, since it usually requires less investment and a smaller scale of works.

3.1.3 Public service infrastructure: freshwater, sewage, and solid waste.

> *"Before, we never had water problems because each house had its own cistern where rainwater was collected. And since we did not have factories or anything that polluted the air, then we could use that water. Each house had its cistern and its septic tank, we did not need a sewage system because it was only us [few native inhabitants]. But then all those people who came from outside [migrants and massive tourism] damaged everything, because they did not have enough sewage systems… and that goes to the subsoil, damages the water, damages the plants, water becomes contaminated and brings infections. Sometimes, when it rains in the center, in the heart of the Pink Zone, and the sewage system overflows."*
>
> (*T*wo Raizal men from La Loma. Interview 14).

When you are in an island where the public services are limited, where some sectors do not have the basic public services, but even though everyday there is a new hotel of 5, 6, 7 stories that consume water, which needs services sewage system and collection of solid waste, one realizes that the capacity of the island is less than the population it hosts."

(Raizal woman from Elsie Bar – Interview 32).

Access to freshwater.

The issues with freshwater in San Andrés are not new. The island does not have a river system, so all water for consumption must be obtained from underground deposits or through the collection of rainwater. The Raizals have always known this, which is why they have traditionally used wells to extract water from the aquifer, and implemented rainwater collection systems using roofs as collectors, to later store the water in cisterns. Rainwater harvesting has been crucial during the rainy seasons, which allowed them to secure water supply during drought periods.

However, the availability and access to fresh water has become a problem, according to all interviewees. They strongly agreed that the availability and access to water is the greatest environmental problem faced by inhabitants due to a combination of factors, such as overpopulation, high demand of the tourism sector, infrastructural deficiencies, loss of traditions, and climate change. Moreover, they argued the so called 'water crisis' in 2015 and 2016 (See, for instance, Velásquez, 2020), exposed the inequalities and disbalances regarding how water from the aquifer is obtained, distributed, and even the prioritized in some areas of the island, and the high pressure over the underground deposits that render water scarce for many islanders.

Interviewees from the Raizal community reported that they constantly suffer from water shortages, especially in rural areas like *La Loma, San Luis, El Cove, El Barrack,* or *Elsie Bar.* However, water shortages not only affect the Raizal communities, but also the Continental community, as a result of unplanned expansions and densification of neighborhoods in the urban area, such as *Natiania,* and proliferation of shanty towns outside the urban boundaries. The problem of water scarcity, according to interviewees, is complex for it combines both natural and anthropogenic processes.

First, most interviewees explained that the existing aqueduct only supply the urban area, namely *North End* sector (where the hotel infrastructure is located). According to them, this sector is completely prioritized and receives supply between 12 and 24 hours a day, while in the rural areas of the island (Where most of the Raizal population is concentrated) the supply is highly variable, usually consisting of 30 minutes to 2 hours of service with gaps that go from 3 days to even more than one month. Some interviewees also commented more than 50% of the resource is lost to pipe leaks. Interviewees who are affected by these problems have not experienced major positive changes, despite alleged efforts to improve service by the private company that has concession for the water service.

> *"The water service does not work, it is terrible, lousy! Veolia sends you water for about 20min to half an hour, sometimes every two months, sometimes every month and a half. I had two months without water. They sent water for about half an hour and the next day they came with the water bill, seriously. That's a robbery, it's a scam."* (Raizal man from La Loma. Interview 11).

Second, many Raizal interviewees denounced that the freshwater reservoirs (San Luis Aquifer and San Andrés Aquifer) are being drained to supply Hotels and wealthy people, affecting the lives of natives from the impoverished rural areas. Interviewees explained that there are several companies that have concessions for extraction of water from wells in the area of *Duppy Gully*, that is later treated and sold in tank-trucks in *North End*. They said the points for extraction are located underneath the area where most of the Raizal population is concentrated. Many Raizal interviewees, argued that the softening plant of Duppy Gully is 'stealing water' from their land to pump it to the North. They perceive the inequalities in access to water, since they have little supply in comparison with the North of the island that has secured supply. But, Velásquez (2020) contradicts the latter, explaining that the Duppy Gully softening plant provides water for the Rural area, and a desalination plant supplies the urban area. However, the study argues that both plants operate at half the capacity. This conflicting information may be due to the desalination plant being relatively new, causing some Raizals to have outdated information on where the water is sourced. In any case, the investment is high, and the infrastructure development is directed to the tourism sector, which supports the Raizal views.

> *"Our water resources are basically in wells, they are underground. Our fresh water is drained and taken to the northern part of the island, to the large hotels, leaving the southern part where the Raizals live, San Luis here where we are, La Loma, El Barrack, Tom Hooker,*

El Cove, without water. This is due to the fact that water is for tourism, but not for the native population " (Raizal man from San Luis. Interview 10).

"The government does not give us water. Instead, they prefer to sell it to companies and hotels. So, those who are always benefited with water are the tourists, while sometimes we do not have enough to shower, wash, or cook anything."
(Raizal woman from La Loma. Interview 9).

Third, the use of wells has been affected, since the amount of water available in the subsoil has been decreasing both in quantity and quality, according to many interviewees. They argue that this is a consequence of water being over-extracted, exceeding the natural recharge rate, which produces intrusion of salty water from the ocean. Some interviewees have also reported their wells to be highly polluted with sewage leakages from domiciliary septic tanks, which are gradually infiltrating the soil. It is important to note that the coverage of the sewage infrastructure in the island is minimum, it does not reach the rural area, and only provides service to only 21% of the *North End* sector.

Finally, the interviewees who mentioned the use of rainwater collection systems, explained that sometimes, its use becomes impossible given the increased contamination from vehicle emissions deposited on the roofs, plus the fact that climate change is rendering the rain seasons more unpredictable, becoming water harvesting difficult and complex. In addition, changes in uses and traditions in the community, are causing the disappearance of the rainwater harvest systems, and also the cisterns to store the water. Interviewees explained that unplanned densification of residential areas reduces the available space to install such infrastructure. There is also a cultural component which determines the habit of collecting water to be abandoned, as the influence of the Colombian culture over San Andrés increases. People from the continent does not have the habit of collecting water, in contrast to the native islanders.

Interviewees from the Raizal and Continental communities, in rural and urban areas, informed that water is accessed by different methods, according to their physical and economical possibilities. Most of interviewees reported the use of diversified systems, given the unreliability of the aqueduct, and the difficulties to access water from other sources. Interviewees from the urban neighborhoods reported that they have access to the aqueduct but complement it with water extracted from their private wells, although some of them preferred not to use well-water because the aquifer in the urban area is highly polluted. Instead, some interviewees reported buying water from tank-trucks to refill their cisterns.

In the rural areas, interviewees relied mostly on a combination of wells and rainwater harvesting, as the aqueduct service is deficient. However, they noted that different to the urban area, wells in the rural sectors are in some cases difficult to make, depending on the exact location of the household, because the hilly profile of the island sometimes requires the well to be deeper to reach the aquifer.

Interviewees strongly agreed that underground water is not safe for drinking, and its use is limited to cleaning purposes, for the bathroom, to shower and some cooking. Similar is the case of water from the aqueduct, which most participants considered not suitable for drinking. Those who used rainwater collectors reported that they boil it and use it for drinking in some cases, but not as a consistent practice, as sometimes they find the collected water to have carried pollution from the roof.

These particularities determine that in San Andrés, the great majority of the population resort to private sources of drinking water, which is sold in the island at high prices in supermarkets or commercialized by companies in 20l bottles and 5l bottles or sachets. Almost all interviewees reported buying drinking water as a normal practice, a habit that they have completely internalized, and the only safe alternative they have, and many of them did not complain about private sources as the only reliable source of drinking water. In the rural areas, I have observed the existence of 'water ATMs' consisting of an automatic water dispenser which refills a bottle upon payment for the desired volume.

Figure 11: *Water ATM (Photographer: Juan Diego Ayala)*

"Access to water, a fundamental right in any part of the world, here has not yet been satisfied for anyone. There are private initiatives, the population has used them throughout the island. There are water outlets. People through an electronic machine deposit an amount of money and their bottle is filled. But they are private initiatives, at the national and departmental level they are still in debt with the people." (Raizal man from San Luis. Interview 10).

"The purchase of water is becoming the norm. People use the bottle more and more. As the Continental population is so large and they do not make cisterns, those who can afford it, buy water in bottles. I think that should be public. This should not be private or should be dressed directly by the government and with accessible prices, because the water business is becoming more lucrative for companies and more unfavorable for communities, especially the Continental one that does not have the habit of save water." (Raizal man from North End. Interview 26).

Some members of CORALINA explained that the extraction of water from the aquifers for commercial purposes is highly regulated and monitored to remain in levels low enough to allow the natural recharge of the aquifer. However, they noted that these regulations (which establish the maximum of m³/year to be extracted sustainably) may be not up to date given how climate change is modifying the rain cycles resulting in less gaps between droughts, in combination with deforestation processes which result in increasing runoffs of water that never reaches to the subsoil.

"Since 1960 there have been political guidelines where tourism is prioritized. Wells were conceded, and the aqueduct was generated first for the northern area. That is explicit, it is written, and a dynamic was started, infrastructures that continue to prioritize tourism. And that is why you see a strong aqueduct, both for tourism and for some areas they are densely populated, but they are not precisely Raizals populations, of course, because the Raizals were displaced to the south and to the center." (Resident woman, social researcher. Interview 1).

A researcher with experience from the water crisis of 2015/16 pointed out that the historical development of the aqueduct involved political decisions, power structures, and private contracts for public services, that indeed determined a prioritization of the touristic and commercial areas of the island, as most of the original infrastructure was built to supply these areas. In the last couple of decades, she explained, the increasing number of tourists promoted by some sectors of the national government, resulted in a colossal demand of water from the

North of the island, which is something that does not help to solve the struggles of the communities in the rest of the island.

Figure 12: *Tank truck from a private company delivering water (Photographer: Juan Diego Ayala)*

Increasing solid waste

Production and management of solid waste was frequently mentioned by interviewees as an important environmental problem of San Andrés. Both Raizal and Continental communities agreed that the production of solid waste in the island is enormous compared to the size of the island, as a result of the large population and the increasing number of tourists. They explained that since San Andrés is so isolated and depends entirely on imported food and products, everything that arrives in the island, stays in the island. This has produced accumulation of solid waste in large quantities, which are stored in an open pit landfill called *'Magic Garden'*, which receives between 50 and 80 metric tons of waste every day, according to some interviewees. In fact, a sign placed outside the entrance of the facility informs a capacity 60.313 (25.618,8 already used, and 34.694,1 available), and a volume of 2.517.1 Mt disposed in February 2021 (an average of 89,89 Mt/day).

> *San Andrés currently has a solid waste disposal that compares to a large city in Colombia. Solid waste accumulates. Any practice that occurs, does not mitigate the problem that has arisen in the last 20 years of consumption in the island. The population of San Andrés surpasses the population of the larger islands, and the*

production of waste is greater than the capacity of the island. (Raizal woman, Elsie
Bar - ITV32).

Magic Garden is operated by a private company with a state concession different from the company in charge of the collection. The site is of approximately 7 hectares, of which 5.5 hectares correspond to the landfill. Unsorted waste arrives from all over the island to be disposed forming terraces and covered with a geotextile fabric that prevents dispersion of garbage and infiltration of rainwater.

However, all the interviewees agreed that the management of the site is deficient. For instance, they claimed that is frequent to observe spontaneous fires due to the release of gases, and the formation of lixiviates that infiltrates the land, or reaches the road and is lost through storm drainage. These lixiviates end up contaminating the underground water deposits, and in some cases reach the ocean causing great environmental damage. Interviewees also said that the geotextile coverage is not effective, and that given the size of the site and its poor management, the garbage is overflowing and there is dispersion in the surrounding area. I could corroborate this from outside, since I was not allowed to enter the facility.

*"Here the garbage is a business, the companies, one in charge of collection, another
of disposal. But the final disposition has never been technically correct. Thus, we
have a giant dumpster, because it cannot be said that it is a proper landfill. For many
years it was open pit, then it was covered, but it is just a cover, never has been given a
definitive solution."* (Member of the IGAC. Interview 5)

Magic garden is not the only source of garbage accumulation on the island. Interviewees explained that throughout history, unsustainable practices of waste disposal have been common, and many of those continue to occur. Many participants, including some who work as professional SCUBA divers, commented on the existence of a site that has historically been used as a garbage dump on the west side of the island. They explained that at a depth of around 50 meters it is possible to find a huge deposit of garbage of all kinds, even appliances or vehicles. Much of this garbage has been resurfaced by the hurricanes in 2020, ending up over the coral reefs and even back inland.

Another major problem with waste comes from the fact that the population does not have adequate education regarding recycling and disposal practices, which causes the proliferation of informal garbage dumps with all kinds of waste, especially those that are not collected by the collection service, such as tires, appliances, or furniture. These are called *'post-consumption*

waste'. During my stay in San Andrés, I was able to verify the existence recycling campaigns for this type of waste, carried out regularly by government departments in collaboration with the army, through news media campaigns, and collection points around the island.

I was also able to verify the existence of a waste sorting system present in several lodges and public spaces. The system is based on sorting by type of waste through the use of bins of different colors. In practice, these always contained unsorted garbage, which suggests little will and awareness of both visitors and residents. However, several participants claimed to practice waste sorting, especially plastic, despite acknowledging that it is of little use, since the final disposal does not discriminate waste by type. Regarding this last point, there is currently a waste-to-energy (WTE) plant, which has recently been inaugurated after more than ten years of promises. This plant has a sorting facility since the conversion to energy is only carried out with part of the waste. Interviewees who commented on this facility were cautious to believe that the WTE would be helpful, since they claimed to have been deceived in the past by governments who promised solutions for problems in San Andrés.

> *"There is a MSW plant that will supposedly vanish waste like a magic trick, and the national government has invested a lot of money, numbers that one cannot even pronounce because they are enormous. It seems like it will start operating, but they have been saying the same for years and it does not work"*
>
> (Resident woman from Los Almendros. Interview2)

Finally, something of concern for most interviewees, is the amount of macro and micro plastics found on the totality of coast. There are some NGOs on the island which work to minimize the impact by organizing beach-cleaning events, in collaboration with people from the community. There are also marine-bottom cleaning campaigns, in collaboration with diving agencies and certified divers.

Many interviewees identified tourists as mainly responsible for the plastic pollution since they are the ones who usually litter bottles and plastic packages on the beach, and who usually do not have the desired behavior regarding disposal. But there were interviewees who also noted lack of conduct in the local population. Their explanation is that, given an island where so much waste accumulates, people have become tolerant of its presence. Many inhabitants, especially immigrants, have never developed a great sense of belonging to the island, and they do not have habits of caring for their environment. While others, even Raizals, have gradually

abandoned the good practices as they are constantly surrounded by waste. In other words, a phenomenon of internalization of garbage as part of the environment.

Sewage infrastructure

The sewerage system in San Andrés is an inadequately extended public service infrastructure in San Andrés. According to most interviewees, the combination of low coverage and high population results in an increasing environmental degradation, not only because malfunctioning of the system, but also due to the lack of capacity. Service coverage barely reaches 20% of the inhabitants, and only in the urban area. According to interviewees, the sewage infrastructure is old and was originally conceived to supply the beachline at *North End*, where most of the large hotels are located, and later extended to supply other sectors of the urban area. They emphasize that the network is not robust enough to manage the amount of sewage generated by the densified hotel areas, which causes constant pipe breakages with subsequent overflow of sewage, especially at the point called cafe-café in the beginning of *Spratt Bight* beach.

My field observations partially confirm these statements. In all the sector known as *'Pink Zone'*, where some of the most traditional hotels are found, a bad smell of sewage is present at all times. It is precisely at the *Café-Café* point where I witnessed at least 5 sewage overflow events within 40 days, which consisted of the overflow of what appeared to be a mixture of storm drain water with sewage, possibly because both systems are broken or leaking under the street. Therefore, during a rainy day, there would be water overflowing through some of the access covers in the street. This wastewater then returns to the drainage system reaching a nearby outlet to the sea on *Spratt Bight* beach.

In San Andrés there is no sewage treatment plant, meaning all the sewage and wastewater is expelled untreated to the ocean through a submarine sewage outfall located in *Morris Landing* sector, powered by three pumping stations distributed in the north of the island. I interviewed some marine biologists and members of CORALINA who confirmed that sewage is released without treatment, apart from a solids interceptor. Moreover, they said the pipes are only at eighteen meters deep, exposed to waves and currents. In 2020 after the hurricanes Eta and Iota it suffered a partial rupture (El Extra, November 6, 2020), and it had suffered a similar incident in 2017 as a result of strong currents (Ministry of Environment, December 27, 2017). These biologists, however, underlined that although the solution is far from ideal, it is the only

feasible option for San Andrés. Some interviewees commented that the outfall theoretically complies with legislations regarding the dilution of organic matter and presence of bacteria, and that because San Andrés does not have heavy industries, the classification of outputs from the outfall was set to 'organic matter'.

In rural areas the situation is somewhat different since there is no sewage network. Interviewees explained that the usual disposal of sewage consists in septic tanks with absorption wells. This has always been the system used by Raizals prior to the construction of the sewage network. Raizal interviewees highlighted that the use of absorption wells was never a problem for them, because the population was small, so the resultant pollution was easily absorbed without major consequences. The problem they observe is that the processes of urbanization of the rural area as a result of the growing population, and lately the proliferation of hotels and services towards the south of the island, is producing large amounts of sewage and wastewater. These often end up in precarious absorption well systems, sometimes without septic tanks, built with little or no technical supervision, which do not comply with any regulation. The result is that the soils are saturated with sewage, causing the contamination of the underground water deposits. Thus, many water wells became unusable. The situation is exacerbated by livestock production in households, which produce additional untreated wastewaters that reach the soil.

Figure 13: *Sewage flowing through an open ditch directly to the storm drain system near Old Point (Photographer: Juan Diego Ayala)*

In addition, the saturation of soils and clogging of the wells result in overflows, especially after rain, which find their way to storm drains and then, the ocean. There are also illegal outlet from houses, groups of houses, or lodges, consisting of ditches and pipes that discharge sewage and wastewaters directly to the ocean. I was able to verify the existence of several illegal discharge points both on the east and the west coast of the island, as well as places with sewage being carried to the storm drain system by the main road, coming from an urban settlement uphill.

3.2 Population of San Andrés and claims of overpopulation.

"The DANE can say that we are 60 thousand, but one hears unofficially that we are 100 thousand and that perhaps more. Today nobody knows how many inhabitants there are. I think we are more than what is counted.". (Resident man from *North End*. Interview 62)

A narrative of overpopulation was recurrent throughout interviews. Interviewees from the Raizal and Continental communities explained San Andrés as a small territory that has largely reached its carrying capacity, based on the current high population density. They agreed on there is a correlation between overpopulation and the increase in levels of environmental degradation, leading to depletion of natural resources and decrease in the quality of life in the island.

However, these groups of interviewees are certainly heterogeneous, presenting nuances and internal conflicts that determined differences in the understanding of the specific factors responsible for the alleged overpopulation, resulting in different opinions about the causes, and counter accusations between the different social groups.

Overpopulation is mentioned in several official documents, such as the Triennial Action Plan 2007-2009 (CORALINA, 2007) as one of the main causes of ecosystem degradation, biodiversity loss, and low availability and quality of freshwater. "Control and reduction of population density" is defined as a key environmental policy in the *Long-Term Environmental Plan 2007-2023* (CORALINA, 2002), then ratified in the *Institutional Action Plan 2020-2023* (CORALINA, 2018).

The data available on population numbers suggest population in the island was relatively small until 1951. Meisel Roca (2003) used data from DANE and IGAC which shows a quick growth in the period 1951 to 1985, increasing from 3.705 to 32.861 inhabitants, meaning an 8,9-fold

of the population in 35 years. From that point, there are several sources of data and projections based on the 1993, 1999, 2005, and 2018 censuses that create much uncertainty as they provide a wide range of varying population numbers. In 2005, DANE projected 71.553 inhabitants by 2020 (many institutions use these numbers as a basis for their policies), a number that equals 2.650 inhabitants per km². However, the same agency in 2018 estimated 55.291 inhabitants for that year, 22,7% less people. Other numbers are even more conservative showing a decrease in population by 2013, with 47.427 inhabitants. In all cases, the informed percentage of omission of censed people was between 15% and 22% (Cámara de Comercio, 2020; DANE, 2020; Meisel Roca, 2003; Secretaría de Planeacion Departamental, 2018).

This situation of uncertainty about population numbers creates an environment of distrust in the society. It is common to find newspaper articles and people denouncing the numbers are underestimated, and that the real number is between 80.000 and 100.000 people, if not more. A study from CDM Smith INC (2016) calculated projections for 2045 that range between 113.000 and 130.000 inhabitants.
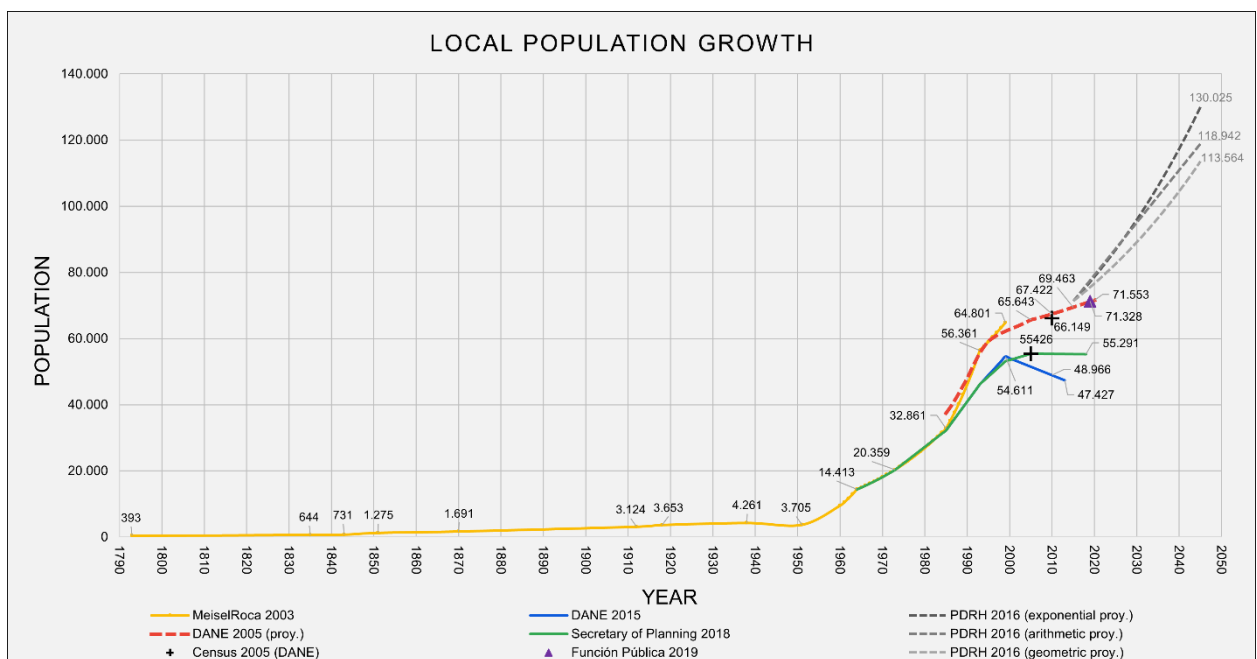
Figure 14: *Local population growth numbers. Own elaboration based on data from (CDM Smith INC, 2016; DANE, 2010a; DANE, 2015; Función Pública, 2019; Meisel Roca, 2003; Secretaría de Planeacion Departamental, 2018)*

3.2.1 Tourist population trends.

The growth and consolidation of tourism as the main industry of San Andrés since the late 1980s and especially since the collapse of the free port in 1991 after the economic opening of Colombia, has caused a gradual increase in the number of tourists who arrive on the island each year.

The data analyzed, based on numbers from Meisel Roca (2003), DANE, and information from newspapers on the island, show a continual growth of tourists, whose trend increases notably since 2009 (411,326) to exceed a million tourists in 2017 (1,051,763). The projection for 2019 was 1,304,999 visitors.

The monthly visitor numbers analyzed for the years 2010, 2011, 2016 and 2017 show that the distribution of tourists per month is always between 7% and 10% of the annual total. Based on this, I have estimated a uniform distribution of tourists throughout the year (disregarding some seasonal peaks in December-January and July-August) to estimate an average daily number of tourists. Based on an average length of stay reported by the interviewed tourists of between 3 and 7 days, therefore I have estimated that every day there is an overlapping number of tourists that is 3 to 7 times the daily number. Finally, I calculated a daily average of tourists living on the island, with 3 possible scenarios, considering stays of 3, 5 and 7 days.
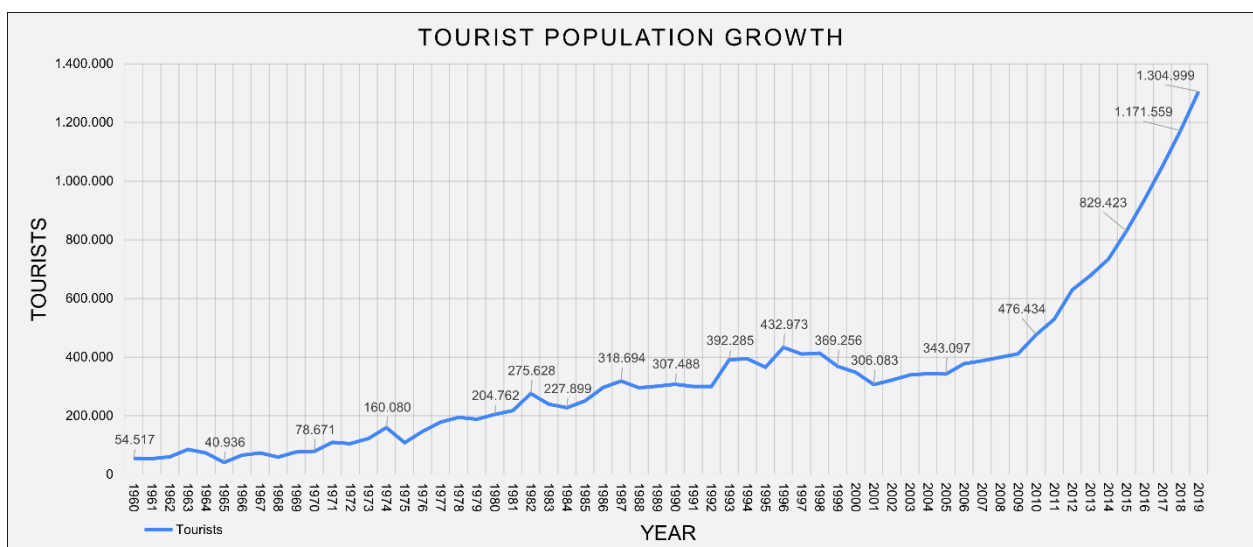
Figure 15: *Evolution of the number of tourists by year. Own elaboration based on data from(DANE, 2007; DANE, 2010b; Isleño, 2018; Llurdes & Téllez, 2014; Meisel Roca, 2003)*
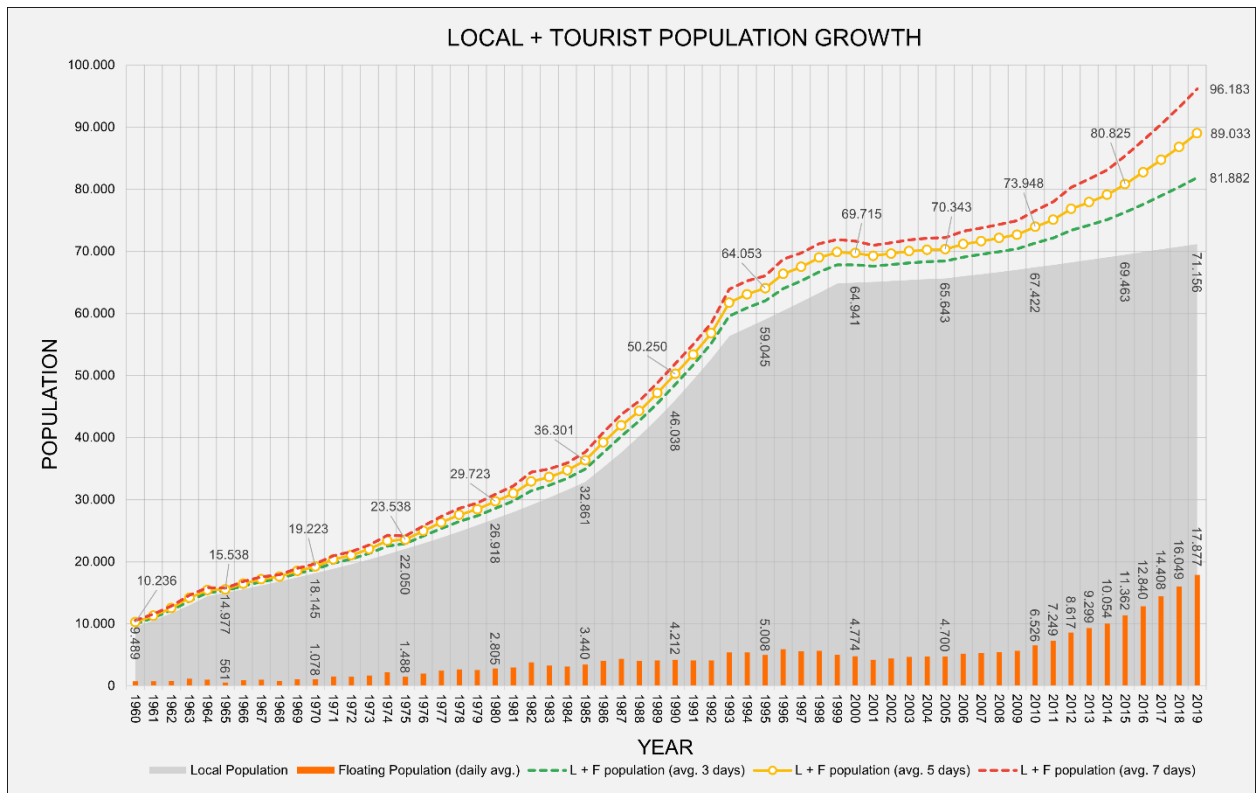
Figure 16: *Addition of local popoulation and average daily tourists. Own elaboration based on data from(CDM Smith INC, 2016; DANE, 2007; DANE, 2010a; DANE, 2010b; DANE, 2015; Función Pública, 2019; Isleño, 2018; Llurdes & Téllez, 2014; Meisel Roca, 2003; Secretaría de Planeacion Departamental, 2018)*

The analysis shows that the number of tourists actually present on the island at any given time has grown at a slower rate than the local population in the period 1960-2009, resulting in a small number of visitors in relation to the population. However, as of 2009, a visible accelerated increase of the number of tourists in relation to the population has been observed, also taking into consideration that the population growth rate has decreased since 2005 according to the official data from DANE in the 2005 and 2018 censuses.

What the figures do not show is the difference in scale and impact of the tourist infrastructure to satisfy the demand of visitors and their relative levels of consumption, the effects of tourism on urban facilities, as well as the differences in the use of resources by local and floating populations.

Most interviewees were concerned about the number of tourists the island receives each year and stressed that it is the result of policies to encourage and promote mass tourism, especially the "all-inclusive" model to maintain growth trends.

3.2.2 Perception of Raizals on causes of overpopulation.

"There was an intention to populate the island to exercise sovereignty of political dominance, without judging anyone, but that happened." (Woman from North End, interview 2)

Interviewees from the Raizal community showed great agreement concerning the overpopulation narrative and agreed in general about the geopolitical and economic origin. They argued that the exponential increase in the number of inhabitants began as migratory phenomenon of Continentals in combination with the influx of Colombian and international merchants. The former, they explained, arrived in large numbers to work in the construction of free port main infrastructure, whereas the latter moved to the island to open of tax-free shops. Most of these people remained on the island, enhancing population growth over generations, Raizals believed.

In addition, some Raizal interviewees went further and claimed it was Colombia's previous efforts to 'Colombianize' San Andrés at the beginning of the 20th century (more than 50 years before the free port) where population problems and social conflicts began. Indeed, Law 52 of 1912, by which the Colombian Congress created the Municipality of San Andrés, says in its article 14:

"Authorize the Government to grant free passages on national boats, to those families of four or more members who express a desire to establish domicile in the Archipelago." (Law 52 of 1912)

The boom of tourism in the 1980s was also highlighted by respondents to have played a major role in population growth, as it attracted countless people in search of job opportunities, and an overwhelming number of tourists that continues to grow every year.

The tourism industry was initially seen as a blessing but ended up interfering with the Raizal lifestyle and causing environmental damage. Raizals perceive that there has been exponential growth in the number of visitors, without little control focused on their behavior. According to most Raizal interviewees, the popularity of the island as a tourism destination has resulted in great pressure on the island's natural resources and many cultural conflicts due to what they consider a subjugation of their land by people who are out of control and whose practices are considered invasive for the community (they mentioned noise, music, garbage, alcohol in excess and drugs).

Raizals find this situation concerning since they consider that there is a current liberal policy that promotes the increase in the number of visitors as a way to improve the economy of the archipelago. However, they noted the strategical expansion of tourism has not resulted in better economic conditions for Raizals in most of the cases, for they believe they are often displaced by Colombian workers for cultural reasons. Despite this fact, most interviewees argued in favor of tourism as they perceive it to be a potential source of good quality jobs if it is managed accordingly to allow sustainable practices -namely a smaller number of tourists, a higher economic standard of visitor, less pressure over resources, and to distribute the income and opportunities fairly within the community.

"The government brought people, teachers, consultants, with a public policy that we islanders were independentists. In the 1980, the tourism boom made many people come to do business here with the free port. And from there, immigration of family members because there were better economic conditions and less social violence here […] And then people that came to work in the big hotels, which did not hire local people since they were seen as lazy. So, they brought cooks and employees to work in the hotels, trying to put aside the local workforce." (Raizal man from Sarie Bay, interview 4.)

In general, the Raizal interviewees perceived that the growth of the local and tourist populations is closely linked to cultural and economic problems of the community. However, opinions varied among interviewees, based on their experiences, perceptions, and social background. While some held strong views against the free port and perceived it as the origin of their community's decline, others have experienced major conflicts in recent decades related to drugs, violence, poverty, and the expansion of the Continental community, not to forget those who cannot tolerate the presence of tourists. There were even Raizals who argued overpopulation (especially in the last decades) to be the result of the uncontrolled migration of lower-class families from the Caribbean coast of Colombia (generally referring to people from Cartagena and Barranquilla) that did not find the expected livelihoods and became marginal. Many blamed this social sector, pointing out that it is the group with the highest birth rates in San Andrés. These opinions were found especially among those who expressed more radical opinions and resistance to the Colombian culture.

3.2.3 Perceptions of Colombians on causes of overpopulation.

Among the resident interviewees, there were different opinions in regard to overpopulation and immigration, with nuances by social class and background of respondents. Interestingly, no resident talked about having contributed to population growth themselves, and usually made other social groups responsible for alleged overpopulation.

In this sense, some residents stated to have a strong sense of belonging to San Andrés, and full legitimacy as inhabitants, since their families moved to the archipelago when migration was not common. They explained they or their families arrived in before the beginning of the free port era and lived peacefully together with native Raizal families. In consequence, this group usually referred to further historical events (free port, mass tourism, and low-class immigrants from the Colombian coast) as the cause of overpopulation.

In the same direction, respondents from the economic middle-class who have been on the island for at least fifteen to twenty years, claimed to have legitimate rights to live in San Andrés, since they comply with the migration regulations. This group, formed in general by people who are in a relatively good economic situation (many of them work in the tourism sector, or have properties for rent, or are professionals with stable jobs) argued that overpopulation is the result of illegal immigration of people who entered the archipelago as tourists and stayed. In particular they blamed people from *Cartagena* and *Barranquilla* to be responsible for most of the social problems in the island. The explanation is that the *'Costeños'1* (from the coast) with low education and a marginal background in their places of origin, came to the island seeking for better opportunities, but usually as illegal immigrants, since migration is highly controlled by the OCCRE. Unfortunately, no people from these lower, and potentially marginalized classes, agreed to participate in an interview to state their opinions.

Although interviewees talked about the problems generated by the increased number of tourists (noise, garbage, and alcohol), tourism was not usually mentioned by Colombian interviewees as a source of conflicts.

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1 Demonym of people original from the Colombian Caribbean coast, for instance, from Cartagena, Barranquilla, and Santa Marta.

3.2.4 Perceived ecological impacts of overpopulation

In the view of interviewees, the overpopulation of San Andrés has several negative environmental consequences. The most important issues derived from interviews were the steady depletion of natural resources and key species important for local livelihoods, as well as pollution and ecosystem degradation as a result of anthropogenic pressure of different origins.

Most interviewees, especially Raizals, reported depletion of the underground freshwater reserves to be the main consequence of population growth in the island. On the one hand, they argued that large number of inhabitants consume more water than the capacity of natural recharge of the aquifer. On the other hand, they said that the increasing number of tourists adds substantial pressure on the resource, resulting in limited availability and diminished quality. Moreover, they highlighted that the combination of high population and lack of an adequate sewage system contribute to contamination of underground water due to sewage infiltration into the soil.

"Look at this projection: in the beginning of the 2000's the projections for the aqueduct and sewage pipes system considered a population of 300.000 tourists per year and 40.000 to 50.000 residents. Today We are talking of almost 80.000 residents and more than 1.000.000 tourists in 2019." (Raizal man from Sarie Bay. Interview 04).

Respondents mentioned that overpopulation produced a great pressure on the ecosystems and were concerned for the noticeable disappearance of representative species which are key for the local livelihoods, such as the conch (*Lobatus gigas*), spiny lobster (*Panulirus argus*), black crab (*Gecarcinus ruricola),* green iguana (*Iguana iguana rhinolopha*), and the coconut tree (*Cocos nucifera*). These species are traditionally important for consumption and small economy among the Raizal households, and according to interviewees, many of the Colombian migrants have adopted the same customs. Moreover, conch, lobster and crab are in high demand by the large number of tourists, and therefore are commercialized in restaurants as exotic local food. The high demand for local products raises the prices, making these species an easy target for the low-income sector of the society that wants to improve their livelihoods. Thus, in addition to the demand of communities for self-consumption and small economy, there is a high demand of the tourism sector on top, which in combination generates what

interviewees characterized as over-harvesting of specimens, resulting in the disappearance of these key species.

Finally, there is concern among interviewees about some trends resulting from high numbers of inhabitants and tourists that produce serious damage to the island's ecosystems. They mentioned extended plastic pollution, uncontrolled water sports (e.g. scuba diving and jet skis), the expansion of urban settlements in forest areas and along the shore, expansion of the agriculture frontier to supply the local demand of food, increasing light and sound pollution from the tourism sector, and a steady increase in the number of transport vessels in the bay as some of the anthropogenic activities threatening important habitats of a small territory that has limited capacity to absorb all the stress is subject to.

3.2.5 Reactions to overpopulation

Interviewees expressed distrust and disappointment with the outcomes of the OCCRE after 30 years of existence. Although the idea of a government institution to control overpopulation was valued as necessary by interviewees, they argued that its effectiveness has reduced over time and believe the OCCRE slowly became another bureaucratic institution, victim of political power conflicts and corruption, and with few resources to meet its objectives.

Interviewees from the Raizal community felt especially upset with the OCCRE and highlighted that the Raizals, who are supposed to be the beneficiaries of anti-immigration policies, have little to no participation in decision-making processes. Many of them have experienced difficulties to be recognized as native islanders, especially those Raizals who have *'Spanish surnames'*, in particular if they were not born in the archipelago or when they returned after living abroad. These issues were perceived by them as examples of the segregation they believe to face, as overpopulation has made the Raizal community an ethnic minority in their own land.

The usual comment among Raizals on how to solve the issues with population was to *'send back'* all the people who do not belong to the archipelago (usually implying Colombian immigrants), although there were interviewees more cautious in their claims who argued in favor of dialogue, given many families are nowadays multicultural. A Raizal woman from *Elsie Bar* reflected:

"We have welcomed people from different nations. We are by nature hospitable, welcoming, friendly. I think that we are at a point where the mix has been so much that it is useless to differentiate. We are in a land that is a limited territory and we, both natives and residents, must learn to live together."

Similar to Raizals, Colombian residents supported the idea of deporting people, in this case referring to illegal inhabitants. Some of them pointed out that it has lately become easy to obtain a flawed residence permit by bribing the OCCRE. Also, many residents were born in the island, for which they auto-perceive as native islanders, and agreed on the necessity of more unity among the different communities.

Despite different views from residents and Raizals, there were similar opinions on how the overpopulation narrative has often been used by governments as an excuse to justify the inefficiency in addressing other problems of San Andrés, as a Raizal man exemplified:

"We have been talking about overpopulation for 30 years, all governments talk about overpopulation. But they do absolutely nothing, they say: 'why should we improve schools, why do this or that if there is overpopulation? Let's first control overpopulation and get people out of here and then worry about the rest.' In other words, there are a lot of problems that have to be solved so that people can have a better quality of life. But all that is postponed because the problem is overpopulation."

Many interviewees believe that governments have misinformed and manipulated statistics deliberately to show smaller numbers and postpone solutions. In the same way, some interviewees spoke about the reluctance of governments to launch a 'carrying capacity study' to prove their point and give a final solution, as one Raizal lawyer from San Luis stated:

"The carrying capacity study would be the tool with which we could show Colombia and the world, that this capacity has been exceeded, but it has never been possible, because obviously what they want to ignore or what they have always wanted to avoid is to speak of the overpopulation that we have."

However, when speaking of carrying capacity, not only inhabitants were included, but also the tourism sector. This is a key issue for CORALINA members and researchers, who expressed their concern with the high numbers of tourists that add pressure on the already threatened resources and contribute to environmental degradation. They advocated for a change of the current model of mass tourism, as a researcher explained:

"There is a strong dynamic in environmental problems that determines it is time to start slowing down mass tourism a bit, but that does not suit it because it reduces income for the island. So, we find ourselves in the middle between the study of carrying capacity and the question of whether there is overpopulation or not."

The desired option instead of mass tourism, according to some CORALINA representatives and researchers, is to promote ecotourism and other forms of exclusive tourism which could generate similar revenues with less visitors, but the idea sounded utopic as it would need for great investments in infrastructure to meet the demand of such type of tourism.

3.3 Structure and characteristics of the tourism model.

The characteristics of the tourism model of San Andrés are broad and of a very diverse nature. For the purposes of this study, I focus mainly on 4 aspects that illustrate the profile of the tourists, their behavior, and motivations during their stay, as well as providing a better understanding of how the industry works in terms of accommodation and activities offered.

3.3.1Profile of the tourist.

The average age of tourists was 37 years old, and 81.5 4% were in the range between 18 and 45 years old. Tourists who arrive in San Andrés are approximately 90% Colombian, whereas the remaining 10% shows a prevalence of Latin American countries, probably due to travel restrictions due to COVID-19. From the total, 90% reported leisure to be the reason for their trip. The main objective of the tourists was to enjoy the sun, sea, and beach, followed by nature-based tourism. The most common duration of the trips was between three and seven days according to surveys and interviews, and 67% of people reported to stay in *North End*, at 200m or less from the beach. The preferred accommodation were hotels and all-inclusive hotels, which accounted for more than 50% of the responses, while apartments and lodges were chosen by 12% of the people.

Regarding tourists' experiences with drinking water, 97% informed that they obtained drinking water by buying it in supermarkets, or that it was provided by the hotels. The most common sources were water in bottles or plastic bags. In addition, 83% of respondents knew about problems with water, both shortages and contamination, although 70% reported that they had not experienced problems during their stay. Environmental problems perceived by tourists

were mostly related to garbage, especially on beaches and pedestrian areas. More specifically, interviewees spoke of problems with plastic waste in the ocean.
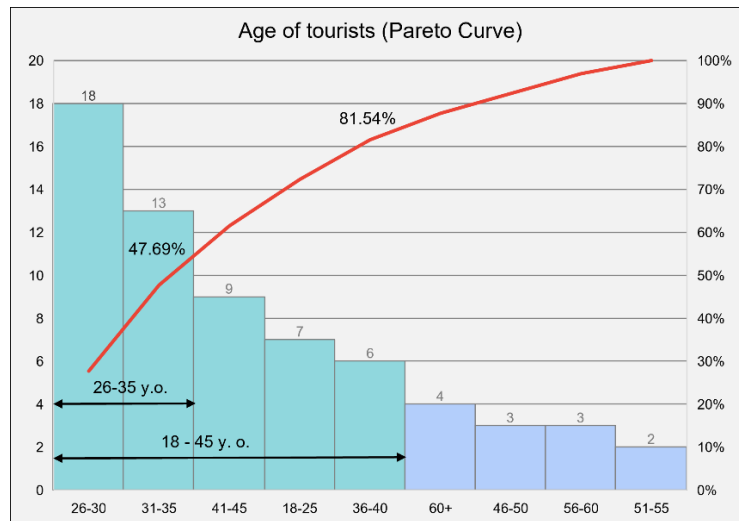
Figure 17: *Distribution of surveyed tourists by age. 81% of respondents were between 18 and 45 years old. 47% of respondents were in the range between 26 and 35 years old. Own elaboration based on primary collected data.*

When asked about eating habits, the survey showed that tourists seek local seafood, but chose shrimp and salmon as preferred, two imported products, not from local fisheries. However, snapper, a product of the local fishery, was among the 3 most consumed items. Approximately 38% of the people reported not to know the fish species when ordering food. 61% of the surveyed people responded that they ordered fish with a size of a plate, for one person. These fishes are popularly known in the island as *'plateros'*-namely, fish the size of a plate.

People showed some knowledge of the Raizal people, referring in general very briefly to them as *'the native islanders, descendants of slaves'*, but in general they did not comment on issues that involve the Raizal community.

Surprisingly, 75% of the interviewees had not heard of the *Seaflower Biosphere Reserve* previously, neither before, nor during their stay. In fact, several interviewees did not know the meaning of the word *'biosphere'* and confused it with *'atmosphere'*.

Several local interviewees pointed out in this sense, somewhat summarizing the type of tourism that the island receives, that the tourist from San Andrés is *'chancletero'* (who walks in flip flops). This term refers to the fact that locals argue that people who come to the island do so

on a tight budget, and generate very little income for the local economy compared to the impact they cause. They literally said that the only thing most tourists care about is *'the beach, the party and the drink'*.
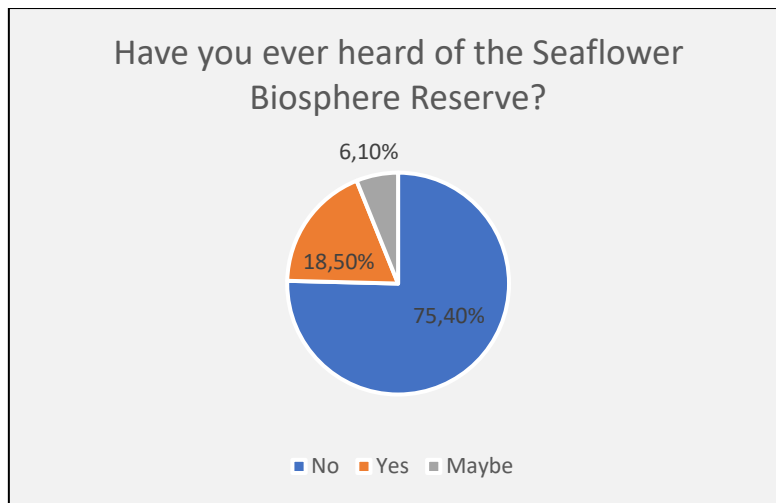
Figure 18: *Knowledge of surveyed tourists about the Seaflower Biosphere Reserve. Own elaboration based on primary collected data.*

3.3.2 Popular tourism activities in the island.

The main tourism activities available in San Andrés are closely related with the opportunities generated from the scenery, given the beauty of the sea landscape and beaches.

The tourism industry is focused on providing a variety of half-day or full-day activities, consisting mainly of the transportation of passengers to the different keys existing around the island. The most popular destinations are *Johnny Cay Regional Park* and the *Aquarium* (a sand bar in front of the east coast of San Andrés, famous for the abundant fishes found). Johnny Cay Park is highly regulated and managed by CORALINA, while the *Aquarium* is municipally managed. The transport services depart from the different docks located in the San Andrés Bay and are operated by local companies and boat owners. These services provide virtually no information about the island's ecology, sustainable practices, or any useful information about the Seaflower Biosphere Reserve. Most tours even include a stop called *'Manta rays'*, where these rays are captured and handled by boat guides to the delight of the tourists, who can touch the species as well. This practice, although prohibited, continues to exist. Boat guides argued that, since it is offered as part of the tour, they feel obliged to do it in order to fulfill the visitors' expectations. Other popular activities include several water sports, such as kite surfing, parasailing and jet skis.
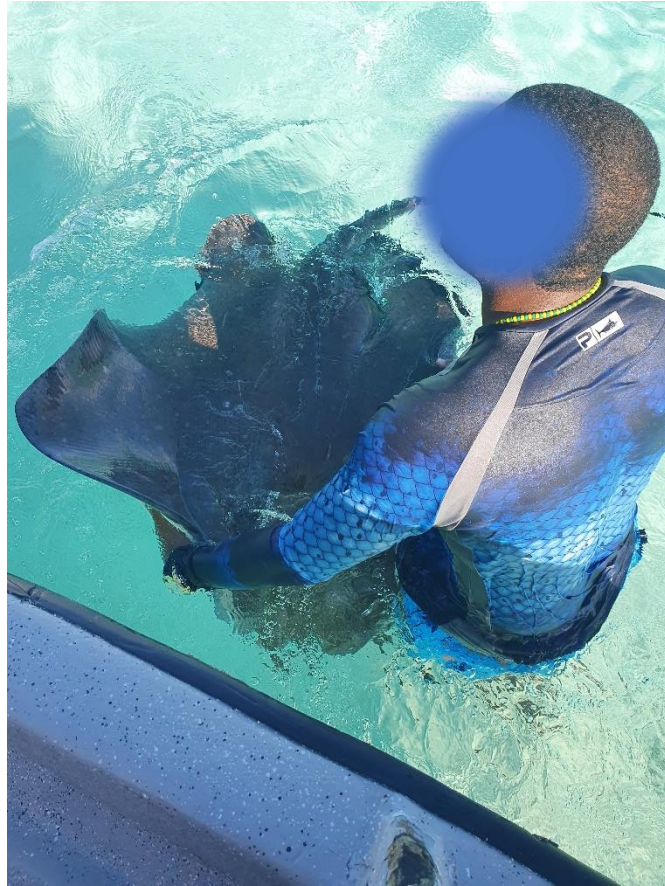
Figure 19: *sting ray being manipulated by boat operator during the "Manta ray" tour (Photographer: Juan Diego Ayala)*

Jonny Cay Regional Park is by far the most popular destination in San Andrés, given the famous turquoise color of the sea. Due to increased degradation caused by large number of tourists in the past, today the Key has a regulated capacity, and it is managed with an ecosystem-based conservation approach, that include different use-zones, no entry zones, and abundant information about the place, its biodiversity and importance, constituting an example of some sort of ecotourism activity. By contrast, the *Aquarium* is almost not taken care of, and that is easily noticeable when observing the overcrowded sand bar, people trampling on reefs to find snorkeling spots, and the dozens of vessels parked. It is necessary to note that this particular place is a traditional leisure place for Raizal families, who every weekend navigate to the Key next to the Sandbar, called *Haynes Cay* by the Raizal community, although is known as *Islote Cordoba* in Spanish. Many Raizals commented they feel uncomfortable due to the 'invasive' presence of tourists.

Biologists and members of CORALINA expressed their concerns regarding the heavy use of the Bay area by boats. They argued the increasing presence of water vehicles, for transport and sports, produce great congestion of the Bay, and visible environmental degradation as a result of pollution with fuel and oil, and damage to the sea bottom with anchors, especially at the popular Keys.

SCUBA diving is another activity in high demand by tourists. This activity, according to some diving agencies owners interviewed, is growing at a rapid pace, and many agencies are concerned about resulting the negative effects. Interviewees explained diving has been installed as a popular activity from the moment it started to be offered in brochures of tour agencies that focus on massive transport to the keys. These offer dives for beginners at very low prices, attracting large numbers of people who have no experience. The result is a visible ecological impact on corals due to unexperienced divers that break them with their fins, cover them with sand, and cause damage when entering and exiting the water from shore. Another consequence is that the massification of the activity has produced a drop in the quality of the service, to the point that it becomes dangerous for the user. Many instructors carry more people than allowed, use half-loaded tanks, and force participants to carry the equipment from the agency to the dive site, usually a few hundred meters. The dive operators explained that part of the problem is that the activity is not properly regulated, not only on the island, but also in the entire country. In addition, the large number of people who seek job opportunities in San Andrés perceive the growing business and become instructors to open diving centers, which often rely on rented equipment, usually in poor maintenance conditions. The result, they argued, is that visitors have a negative experience, both for what they see and for the time they receive, and that is something that is hindering the serious, certified agencies that provide a good service, and that could lead to the decline in the activity in the future.

Another popular activity on the island is the *'road trip around the island'*, through the use of quadricycle or a motorcycle, largely available for rent. This activity is one of the most popular ones and allows the visitor to discover the entire island at a glance, stopping at the different beaches, panoramic points, bars, and restaurants. This is perhaps the best opportunity for the visitor interacts with Raizals if they are interested enough to leave National Route 1 and move towards the interior of the island. There are several historical sites, museums, and some very simple visitor centers which allow the visitor to learn about the island culture. Unfortunately, these are not as popular as the beaches and the sea. There is a great imbalance as to how the tourists perceive the environment, and that is easily observable given their behavior

concentrated on the coastline. The overwhelming beauty of the marine environment gives the visitor an outward perspective of the island, and very few are interested in what happens inside.

There is a protected mangrove area on the island, called *'Old Point'* that was mentioned by the interviewees as interesting. This place is managed by CORALINA, and it is probably the only significant ecotourism activity that exists in San Andrés, apart from *Johnny Cay Park*. It consists of a series of elevated walkways that lead to the heart of the mangrove. There are several signs with infographics on the biodiversity of the mangrove and its importance for the island's ecology. The site is complemented by a private business of guided boats which aims to teach about the biodiversity of the mangrove coastline. There are no other ecotourism ventures *per se* on the island. Several interviewees commented that ecotourism has not yet gained strength, even if the so-called sustainable tourism is being actively promoted.

Finally, something that I was able to observe in my field visit is the large amount of alcohol consumed by tourists at all hours, combined with a high degree of acoustic contamination from high volume music. Although this is something very common in tourist destinations, the cheap price of tax-free alcohol results in its consumption to be massive and excessive throughout the day. This produces not only large amounts of waste, but also improper behavior of tourists that annoys the inhabitants of the island. The noise generated by dozens of wireless speakers at full volume is one of these conflicts.

3.3.3 Characteristics of accommodation.

Accommodation in the island developed as a result of the mass tourism model. Since the launching of the free port in San Andrés, the existence of large hotel complexes has increased, something several interviewees indicated was a result of ways of approaching real estate development by copying other places in the Caribbean, such as the Bahamas or Miami. The hotels are generally the largest buildings on the island, not only concentrated in the North End area, but also scattered throughout the rest of the island in the sectors with landscape and scenery value. These are operated by a few hotel chains that own up to 5 or 6 hotels each. In general, the owners of these hotels are not native to the island and belong to companies with headquarters in Continental Colombia.

In recent times, the *'all-inclusive'* approach has become popular in some hotels. This is something interviewees have described as extremely damaging to the livelihoods of many

islanders. According to them, hotels, in agreement with airlines, offer packages with air tickets, accommodation and food at very affordable prices, as a way to promote tourism on the island. This generates an increase in the number of visitors that does not translate into higher incomes for the islanders, because hotels provide tourists with everything they need, so that consumption of locally sourced products and services is much lower.

In parallel, there is a large market for private apartment rental, which are offered as short-term rentals to tourists and are offered on online platforms such as Booking or Airbnb. This is the source of income for many non-Raizal inhabitants of the island and Colombians who do not live in San Andrés, usually of a socio-economic class that has allowed them to capitalize on the real estate market. This is something that many Raizals regret because the increase in real estate development leads to an increase not only in property prices, but also in products prices, on an island where almost everything consumed is imported. Many participants mentioned the housing bubble as a problem that increases the cost of living on the island.

Finally, several places offer accommodation under the name of *Lodge*, which are generally houses that have been transformed into small accommodation facilities, of a wide variety of categories and locations. There is a particular variant, called *Native Lodge*, which I will talk about in the next sub-section.

Respondents and interviewees showed a clear preference for hotels with 51% of the total, of which almost 25% chose 'all inclusive'. Apartments and inns obtained 12% each, while native inns occupied 9%. The rest was shared between hostels, Airbnb, and others.
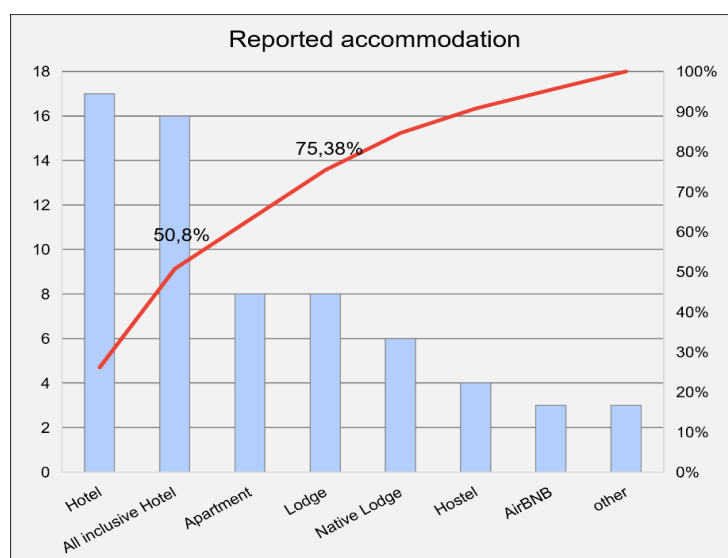
Figure 20: *Reported chosen type of accommodation by surveyed tourists. 50% of tourists chose hotels. Ow elaboration based on primary collected data.*

<u>3.3.4 The *'Native Lodge'* initiative.</u>

The *Native Lodges* constitute perhaps the most genuine example of how tourism can serve to improve the living conditions of inhabitants whereas serves to promote the local culture, by fostering sustainable and desirable tourism practice.

> *"We did not know anything about tourism. So, we decided to put our house to work and receive people. And we had nothing special. So, we decided that we were going to teach them or tell them who we are. Easy to say. We speak a different language, different gastronomy, different customs. We were totally different from the people that come from mainland. So, in the very beginning we were something like five or ten household which dedicate to welcome tourists, because the problems that people coming speak Spanish, and our parents didn't speak Spanish. It was very difficult to interact with the foreigners. We consider the Colombians as foreigners."*

The *Native Lodges* are essentially inns for tourist accommodation. But what differentiates them from the rest of accommodation offered, is these area true Raizal houses, where their owners actually live. I had the opportunity to interview 2 owners of *Native Lodges*, who explained their origin and importance for the tourist development of San Andrés.

The *Native Lodges*, according to the interviewees, have always existed, albeit informally. Their origin dates back to when mass tourism did not exist in San Andrés. Some families decided to put their homes to work as guest houses, both in attempts make some profit and at the same time produce cultural exchange with the few visitors who came to the island before the free port.

With the arrival of mass tourism, and due to the economic and social problems of the Raizal society as a consequence of the neo-liberal development model implemented, some Raizals decided to organize themselves under the name of *Native Lodge Initiative*, to stand against the large hotel developments, and as a way to protect and promote island culture and avoid its disappearance.

Native Lodges are entirely different from hotels. Here, the interaction with the Raizal families is constant. The interviewees explained that the families welcome the tourists to live with them, so they can learn about the Raizal culture, their Creole language, gastronomy, customs, spirituality, and have and enriching experience when leaving the island. However, they highlighted that this romantic vision of the *Native Lodges* is not always entirely correct. They explained they have good experiences with tourists, who in general are people that look for a more local experience when travelling. But in terms of competition with other types of

accommodation, owners feel they are in a disadvantageous position compared to hotel chains with hundreds of rooms, which offer all-inclusive services, and have large numbers of passengers, in comparison with the small *Native Lodges,* which usually have no more than 6 or 8 rooms, and which maintenance is expensive, in addition to taxes and services. The interviewees agreed that progress becomes really difficult, and revenues are barely enough to subsist.

Figure 21: *Two different views. On the left side, a Native Lodge with between six to eight bedrooms. On the right side, a hotel of 6 stories under construction (Photographer: Juan Diego Ayala)*

3.4 Social and cultural changes in the Raizal community.

> *What Colombia did was to exercise the theory of the Nation-State, of colonization, of surrendering to modernity. Therefore, it did not matter to raze a territory and destroy a population, decimate it, and destroy its identity and culture. (Raizal man from North End. Interview 26)*

The systematic colombianization of San Andrés was reported by several interviewees to have caused severe damage to the Raizal society, up to the point that many Raizals believe to be facing the decline of their culture if no changes are introduced with success in the upcoming years. Some Raizals characterized the events that took from the XX century as '*cultural*

colonization' perpetrated by the Colombian authorities, where the territory and its people was subdued by the national power, using economic development as an excuse.

Despite the measures in order to colombianize the archipelago in the beginning of the XX century, Raizals agreed that the implementation of the free port was the starting point of their social and economic struggle, for they experienced the most violent changes during the period between 1955 and 1985. Much of these changes were initially related to large-scale infrastructure development projects for the free port that had serious land tenure rights, social and environmental implications, which consequences have been very difficult for the Raizal people to overcome, even today.

The airport, wharf, roads, tourism infrastructure, together with immigration, population growth, and an avalanche of visitors which resulted in a dynamic of quick changes from multiple fronts in all orders of the society at once. In several of the interviews, Raizal interviewees expressed they did not expect such profound changes and did not know how oppose to these forces in equal magnitude.

> *"San Andrés had a very quiet life. We were few, very few. When I grew up, we were five thousand people, and we all knew each other. We were all friends […] We did not have much information about the political processes outside San Andrés […] So when people came, and it seemed to us that one day they would leave, that they came temporarily, that they did not come to stay, and therefore we did not worry so much." (Raizal man from North End, interview 26)*

3.4.1 Changes in land tenure.

Throughout the interviews I conducted, Raizals explained that traditionally, land in the island was family-owned and inherited. Every family had its own piece of land, and there were no markets for land purchase. Land had a cultural, traditional meaning, and its value resided in the small-scale agriculture production, and the religious and cultural activities Raizals practiced. Families respected the common rules, believed in each other, and they exerted mutual control over the territory and the resources for they had a strong sense of belonging to San Andrés (i.e., James Cruz & Soler Caicedo, 2018). One participant suggested this ancestral land regime resulted from the fact that the original inhabitants did not have to fight for their land for centuries, for the archipelago received little attention by both Spain and Great Britain since

1677 (See, for instance, Herrera Rodriguez, 2016; pp. 35, 36). In fact, interviewees pointed out they did not have formal written titles for the land, essentially because they did not need them, and knowledge about limits of their property was orally passed through generations.

Raizals have been experienced significant changes in land tenure in the last 75 years. Interviewees explained how *Raizal* families were forced to leave their ancestral lands often through the use of mechanisms that took advantage of the little understanding of local communities about neo-liberal ways of development. Interviewees set the construction of the airport as the first major violation of their rights over the land in San Andrés.

> *"Everything has been disappearing with the historical transformations […] we were a small population with solidarity and respect […] With the establishment of the free port, the idea was to convert this land, says the law, in a national showcase […] So, in order to do that, they obviously needed land, buildings, and the first big construction was the airport." (Raizal woman from North End, interview 22)*

Inaugurated in 1959, the same year that the free port was made official, the sole construction of the Gustavo Rojas Pinilla airport produced unprecedented negative impacts in areas of important ecological and cultural values that sustained the lives of many families. But most importantly, the large scale of the project resulted in evictions and land claims that, according to interviewees, started a period of aggressive changes in the land ownership scheme.

From 1959 onward, traditional property rights were often disregarded by national authorities, leading to numerous expropriations as demand for land increased. Sometimes these events resulted in evictions involving the use of force. In this sense, some interviewees admitted that there were conflicts with the authorities, since the Raizals had the British custom of relying solely on the word as proof of land ownership, while Colombia based its administration on the Spanish system of written property titles.

The free port economy created new land markets for the tourism and trade sectors, adding substantial selling pressure on local communities. In the best of cases, the land was acquired by the state or individuals at extremely low prices, something very disadvantageous for the Raizals who could not afford new land elsewhere as market values increased with the rise of mass tourism. Many islanders were persuaded or scammed into selling their land with false promises of restitution after decades of exploitation, perhaps 20 or 30 years if they were lucky enough to negotiate good terms.

"In different parts of the island, there were some transactions that they (Colombians) made with the elderly. Many of them did not speak the language (Spanish) and signed leonine contracts conceding their lands for many decades. And slowly, the Raizals lost power and dominion over the land".

(Woman from North end)

Interviewees also mentioned a fire that destroyed the City Hall in 1965 as an incident that contributed in great manner to the loss of land of the Raizal people (See a related newspaper article, Francis James, January 19, 2015). They told me that the Raizals had begun to have their land titles as written documents in order to deal with the conflicts that were taking place as a result of the differences in how land ownership was certified. In the fire, all the property titles that existed were lost, and the belief of many of them is that the fire was intentional, although it could never be proven. Raizals argue that after the fire, there was a quick process of land grabbing facilitated by the Colombian state through acquisitive prescription laws and declaration of vacant lands to give it to non-Raizal people, generally related to the port and tourism.

"In 1960 or something, the City Hall where the first few property deeds were kept, was lost to a fire. After that happened, the national government drew up an express regulation for land titles. There is a land grab that has marked this territory for quite some time." (Woman from North End. Interview 02)

Several interviewees commented that prior to the fire the Raizals owned almost the total surface of the island, while today the percentage does not reach 50%. It is also true that much of the land in the rural area has never been titled, and even today the Raizals who live on their ancestral lands are victims of land-grabbing due to the large irregular urban expansion that exists on the island.
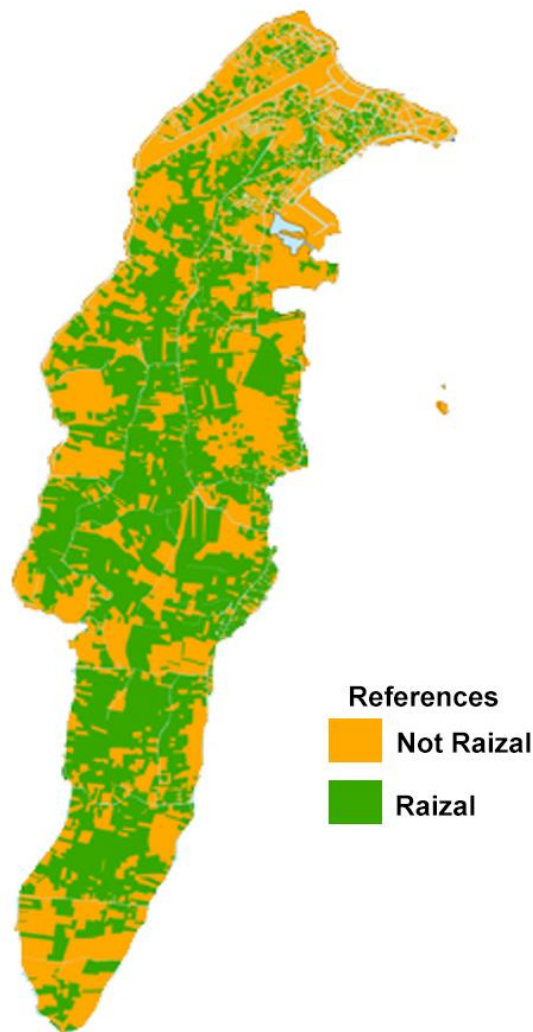
Figure 22: Land tenure of Raizals and not Raizals in San Andrés in 2015. Adapted from (Observatorio de la Reserva de biosfera Seaflower, n/a)

The same mechanisms for land acquisition were later used by the Cartel in the 1980s to build properties and hotels, many of which are still open after the DNE2 seized them back in the 1990s, such as the *Sunrise* and *Marazul* hotels (See, for instance, EFE, February 19, 1998; Redacción Judicial, March 28, 2020).

In a similar way, the coastline has been subject to changes in land tenure. Traditionally, Raizal families had the coast as part of their land, which served multiple purposes, from economic (as

2 The DNE, National Narcotics Directorate, was an advisory, coordinating and executing body of the Colombian Government focused on the control and reduction of drug production, trafficking, and consumption. It intervened in the processes of confiscation of assets resulting from drug trafficking activities. It was dissolved in 2014 and replaced by the SAE, the Office of Special Assets

part of their livelihood as fishers) to cultural (cemeteries were located along the coast, and the beach was used often for leisure in the evenings). Interviewees commented how the community has lost access to the coast. The main reasons are the privatization processes in favor of the real estate business, and the high demand for the development of the mass tourism model near the coast. Today the coast at *North End* is heavily privatized by hotels and commercial buildings. Such is also the case in the eastern part of the island around *Cocoplum Bay, Rocky Cay,* and *Sound Bay*, where access to the beach is now blocked by hotels and restaurants.

Moreover, interviewees denounced the existence of a Colombian law that placed the entire shore of San Andrés under government control. Indeed, this regulation exists in the form the Presidential Decree 2324 (República de Colombia, 1984) and concedes the DIMAR3 jurisdiction of the first 50 meters of coast measured from the high tide level and allows it to extend construction permits.

Raizals argue that in addition to the loss land, the constant presence of large numbers of tourists have excluded them to the point that it has become unusual to see locals at the main beaches. They report to have had conflicts with local authorities who want to preserve the beach exclusively for tourism.

From interviews and observations, I could establish a pattern of what appear to be the remains of the traditional land tenure system in San Andrés. The interviews I conducted in sectors North (*North End),* Center *(San Luis, Genny Bay, La Loma)*, and South *(Elsie Bar)* of the island suggest a gradient of how land is owned by Raizal families. The North presents the most fragmented land, with Raizal properties usually limited to one house or less commonly a series of houses from one or more families around a shared patio. In this sector Raizals are merged, and often outnumbered by, with non-Raizal neighborhoods and tourism infrastructure. The center of the island is rural and predominantly Raizal, with families that live in their original lands, but also other families that have migrated from the North. In this sector there are processes of urban expansion contributing to land fragmentation. In the South, also rural, there are fewer families, most of them original from the area, who still own larger portions of land.

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3 The General Maritime and Port Directorate (DIMAR) is a dependency of the Ministry of Defense, added to the Command of the National Navy.

However, in every part of the island, interviewees agreed there is land currently being lost to tourism developments and illegal settlements.

3.4.2 Changes in traditional livelihoods

As outlined in the Introduction Chapter, San Andrés has a history of cotton production from 1620 to 1853, and more recently, the coconut industry between 1853 and 1953 (Meisel Roca, 2003). Those two industries were the main livelihood for most inhabitants, who also had a long tradition of small-scale agriculture (in Colombian Spanish known as *'pancoger'*, which means 'to collect bread', referring to those items produced for subsistence), and small scale, artisanal fisheries. However, the collapse of the coconut economy and its replacement by the free port and then mass tourism models since the 1950s, have resulted in major changes in the livelihoods of the Raizal community.

Most interviewees agreed that the traditional livelihoods have been disappearing, not only because of changes in the economic model, but also as a result of the colombianization of the island, in combination with environmental degradation, which determined a significant decrease in small scale fisheries and agriculture over the years within the Raizal families in San Andrés.

The changes in livelihoods occurred between 1953 and 1991 were exemplified by one Raizal participant who works as a promotor of agriculture ventures in the island:

> *"San Andrés became a port that sold all kind of household appliances, such as sound equipment, refrigerators, blenders, with costs much lower than many islands in the Caribbean and Continental Colombia. Agricultural activity began to lose strength as islanders, seeing that they had to wait six months or a year to get a harvest, very easily engaged in any activity, generally as commercial employees. Over time the families gradually abandoned fishing for agriculture, to dedicate themselves to commerce." (Raizal man, farmer. Interview 17)*

according to interviewees, during this period, the abandonment of agriculture was also increased by changes in the use of land, which caused a shrinking in the availability of cultivable land. Usually, islanders considered the commercial sector to be more profitable in terms of cost-benefit than agriculture, and started subdividing their plots, selling or using land for commercial purposes. On top of that, migration waves from Colombia increased the

demand for land for urban expansion, increased later with the boom of mass tourism, an activity that again offered new job opportunities. As an example of the latter, it became a usual practice for some Raizals to sell land in order to buy cars and work as taxi drivers. Even if reported to be a lucrative business for some, exchanging land for cars turned out to be prejudicial in the long term, leaving many Raizals without land, a precarious or unstable job and no chance to go back to their previous livelihoods.

With the consolidation of tourism as the only industry, more Raizals left traditional jobs to work in hotels, restaurants and other services. Interviewees commented throughout the interviews, that despite tourism being valued as good by people, especially younger generations, the jobs they have access to are those that require low skills and offer low salaries, such as waiters, cooks, cleaning staff or as crew members in small transport boats. This is, according to interviewees, very much related with the Continental origin of most business owners. Raizals explained that Continental people usually hire Continental employees for jobs, since they consider the islanders are lazy and difficult to work with. Interviewees who commented on this matter explained that Raizals are soft and calm (in correlation with the historically relaxed lifestyle in the island), unused to endure harsh treatment or cope with stressful situations, or even follow tight time schedules. The conflicts between Continentals and Raizals determined limited job opportunities for Raizals as Continentals preferred Colombian workers, which they considered shared similar values and were hardworking.

The context in which these changes take place is one of constant increase in the cost of living and uncertainties regarding job stability. Interviewees often complained about the high cost of living in San Andrés as a result of the imported origin of products to satisfy the large population and the tourism sector. This, according to them, causes several problems for those who want to make a living from agriculture. Traditional agriculture is mostly organic, does not use technology, which require a great effort, and therefore are of higher prices than those of the imported origin. In addition, the small-scale production is highly variable, meaning farmers cannot meet the constant demand from the tourism sector. Some interviewees reported that big hotels and restaurants allocate payments within 30 or 60 days, and that means the producers need to have capital to subsist during those periods, which they argue is hardly ever the case.

In the case of fishers, the high cost of fuel, the large amount of effort per unit of fishing and the level of risk associated with fishing with small vessels in the open sea, combined with the unpredictability of the catch, becomes the enterprise uncertain. The solution fishers have found

is to join cooperatives, with which they are able to secure fuel, food, maintenance of equipment and boats, in exchange for a percentage of sales after each fishing operation.

In general, the fishers interviewed reported that despite the great effort involved, being part of a cooperative allows them to subsist with dignity with artisanal fishing, and in that sense, they highlighted the role of tourism. They perceive that the presence of tourists increases the demand for seafood in restaurants and hotels, which provides them with job stability. The only objection they made was with respect to the 'all inclusive' trend, which they considered very damaging for they believe this type of business does not consume products from the island and is instead supplied with imported goods.

Another problem that fishers face, and one that has modified their livelihoods in recent years, has been the ruling of the International Court of Justice in the Territorial and Maritime Dispute (Nicaragua v. Colombia) case, in which the Court pronounced itself on the delimitation of the maritime areas between the Parties. The delimitation established that much of the waters of the archipelago were to fall under Nicaraguan jurisdiction. Fishers told me that this has been highly detrimental to them, despite the fact that access to their traditional fishing areas (for instance, *Quitasueño, Serranilla, Cayo Bolivar, Roncador*) is allowed and granted. The problem they face, according to what they commented, is that to get to those areas it is necessary to navigate through Nicaraguan waters, and they are afraid of being detained by the Nicaraguan navy, and that their boats being seized. In consequence, they have reduced their operations in these places, which normally involve trips of several days or a week, and where they obtain higher profits per unit of money invested than fishing in grounds only 800 or 1000 meters from the bay, where the catch is less in comparison.

In addition, several fishermen mentioned feeling very frustrated at having to comply with many regulations imposed by CORALINA, for instance, respecting the MPA boundaries, fishing bans and bans on the use of certain technology (e.g., spear fishing with SCUBA equipment, and the use of traps are forbidden). They recognized the importance of conservation of marine resources, sustainable fishing, and very much agree with the efforts CORALINA makes to train fishers regarding good practices. However, they see how the waters that belong to them, are being overfished by ships with Nicaraguan flags, and from other countries that both Colombia and Nicaragua have fishing agreements with. This perceived injustice has led them, on occasions, to resort to illegal fishing (e.g., shark fishing) or to disobey regulations, especially the seasonal ban of spiny lobster and conch. They explained they have the right to resources

and prefer to do so before foreigners deplete the resources. Similar is the case of the coastal waters of San Andrés, where fishers argue that uncontrolled illegal fishing for protected species is perpetrated by marginalized Colombians, who seek to survive from harpoon fishing, while Raizals fishers do not have access to those resources.

Due to all these difficulties, interviewees who have had experiences with agriculture and fishing made it clear that they do not encourage their children to pursue these activities. Instead, they want their children to study so they could afford a better future with jobs that involve less effort and allow significant economic growth. These activities are usually related to tourism, commerce, specialized professions, or public administration. In recent years, the latter has become an important source of jobs for many Raizals and is one of the largest sources of employment on the island.

However, traditional livelihoods continue to play an important role in an island where the informal economy is the common rule, and half of the population live below the poverty line. Fishers in particular, when asked how they evaluated the viability of the fishing activity, answered that despite the life as fisher is especially hard, they do not consider leaving it, as it is part of their identity. This was the usual answer even for those who reported to have other sources of income. The vast majority of the interviewees confessed to have some agriculture for self-consumption, but not in a systematic way. People tend to keep certain low-maintenance crops on their plots, such as breadfruit, plantain, mango, coconuts, cassava, ñame, and sometimes some livestock, usually pigs and chickens. The Raizal islanders, especially the low-income people, constantly turn to them to secure food, in the same way that they turn to natural resources, such as the black crab, the iguana and the conch, important for the local gastronomy.

An interesting fact, and one that exemplifies the role of traditional livelihoods, is how in crisis time people return to their origins as farmers and fishers. People in general in San Andrés have diversified livelihoods, usually doing the jobs they can find. Several interviewees commented how during 2020, in the face of the COVID-19 pandemic, many people returned to fishing in order to provide for their families, and how the agricultural frontier began to expand again.

Many fishers agreed that the lack of tourists had a very negative influence on their revenues. However, thanks to fishing for self-consumption, they were able to survive. Part of their catch was sold to other members of the community to cover expenses, and even given away to the neediest people. Most of the fishers admitted having some agricultural production as a

complement to fishing, and they spoke of a return to the barter system with the community, exchanging fishery and agricultural products within the neighbors to face the crisis.

3.4.3 Cultural changes in the Raizal community

The strong Colombian influence that San Andrés has experienced since the beginning of the 20th century, has been a source of major changes in the Raizal culture, according to interviewees. In most cases, the Raizals characterized these as negative, speaking of *'cultural erosion'* or *'acculturation'* of their people by Colombia.

The consolidation of the free port development model, and later mass tourism model caused not only physical and economical changes, but also determined the traditional lifestyle to be replaced with a Continental cosmovision of the archipelago. A Raizal man reflected on these: *"Colombia is a country with an 'Andean' vision. It is a 'mountain' vision, but this is the Caribbean. And it is not only the Caribbean, but the oceanic Caribbean [...] It is an island, completely different from them. They will never be able to understand what this is."* (interview 26)

Raizals told how, in the early times of colombianization of San Andrés, institutional changes made by the government determined that Spanish language was imposed, and became the only language taught in schools. Moreover, education adopted a Colombian perspective, erasing all the historical and cultural heritage of the Caribbean people, and replacing it with history of Colombia. Raizals exemplified this by arguing they had more in common with the Miskito Indians and pirates of the Caribbean, but they were obliged to learn about liberators and heroes of Colombia such as Simon Bolivar.

Religion was mentioned by interviewees as the main institution in San Andrés. The protestant religion was crucial for the Raizal lifestyle, which they considered the main authority that governed the legal, social, and cultural aspects of the society. But Raizals believe the continuous migration of Continental people gradually caused Protestantism to lose space to Catholicism, resulting in social conflicts because the difference in how life was spiritually understood (for instance, accepted and tolerated behaviors, and respect for religious ceremonies and dates).

Similar was the case of many of the cultural expressions, such as music, gastronomy, customs, and traditions, and the *patios* where Raizals practiced their social life. The *patios* provided a

space for social gatherings, and land to grow many of the crops Raizals used, as well as medicinal herbs and different varieties of tea, key for the *'five o'clock'* tea tradition. They also serve for the purpose of holding the cisterns that were traditionally used by Raizals to harvest rainwater. Most interviewees commented that Colombians did not follow the tradition of the *patios*, which gradually disappeared as land tenure rights changed and the growing population of Colombians who demanded more land, outnumbered the Raizals. These processes were exacerbated as Raizals began to merge with Colombians and form mixed families with accentuated Colombian character over generations, causing the gradual disappearance of most of the *patios*, which washed away many Raizal traditions, some of which are important for Raizal livelihoods, such the case of the cisterns.

Another important transformation mentioned by interviewees is the gradual disappearance of the creole language, argued to be a result of the same dynamics of colombianization and population growth. Raizals explained that many Raizals felt ashamed to speak creole as they were negatively perceived by the Colombian society who took over the Island. In consequence, they had to learn Spanish instead to prevent becoming victims of exclusion. Moreover, the Continental society, which did not share the same sense of belonging to the territory as the Raizal, produced further transformations, especially by renaming areas of the island which already had English or creole names, with Spanish names, such as the neighborhoods *Modelo, Las Gaviotas, Tablitas,* to mention some examples.

The collapse of the free port in 1991 did nothing but accelerate the rise of the mass tourism model that had been growing in the 1980s, and similar phenomena of acculturation occurred, this time because of the large number of national visitors, which meant a constant provision of loud music -*Vallenatos* and *Champetas* replaced *Reggaes* and *Calypsos*-, Continental food -*arepas and empanadas* instead of *Run down, Bailop, or Crab soup*-, alcohol in excess, drugs, violence, and an extended use of the territory by tourists, against which Raizals could not do much.

Raizals see themselves as a minority in their own land, and despite the complexity of the society, most of them argue to have lost control of the decision-making processes and participation in public institutions, which they argue favor the dominant Continental population. They argued in general for more capacity to decide for their land, which ranged from claiming independence, to more autonomy, given their particular origins.

3.5 Social and cultural changes within the Continental community.

Throughout interviews and observations, the evidence suggests that the Continental community is highly heterogeneous and consists of many layers, resulting not only from different waves of immigration in different times, but also from the diversity of origins of the inhabitants.

There are *Costeños*, *Paisas4*, *Bogotanos5*, for instance, who experience their own conflicts within the Continental society, and are also perceived and treated differently by the Raizal communities. There are Continentals who arrived in the island many years before the free port was implemented. Also, Continentals who migrated to the island to work in the free port first, then later in tourism. There are others who have arrived in recent decades in search of job opportunities they did not have in their hometowns. There are some people who are legal residents, and many others living as illegal citizens. The latter often correlates with the lack of good jobs opportunities in their home origins. Finally, there are a large number of people who have Continental origin, but were born on the island, therefore they are as much islanders as any Raizal. In addition, many Continentals have formed families with Raizals, so it is common to find families with both cultures. Hence, the Continental community has complexities and nuances that are very difficult to distinguish. However, as is generally the case in San Andrés, a good part of the Continental population is in a state of poverty.

Interviewees from the Continental community explained that over time, people have created a narrative of San Andrés as a quiet place, with many job opportunities to enjoy a wealthy Caribbean lifestyle. This has generated an influx of low-income people, who are aspiring to escape from poverty in their cities to arrive in San Andrés in search of a better life. The vast majority of these people come from the Colombian coast, for instance *Cartagena* or *Barranquilla*. Most of them with little job qualification, no money, and no place to live. Thus, they have to subsist by doing the jobs they can, and many end up in the same or worse conditions from which they arrived. For that reason, several slums have appeared on the island, where almost all inhabitants are Continentals.

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4 Demonym of the name of people from the old Gran Antioquia region, which today includes the departments: Antioquia, Caldas, Risaralda, Quindio, part of Valle del Cauca and part of Tolima. Paisa is a shortened form of "Paisano" (peasant). The term denotes not only a geographical origin, but also particular social and cultural characteristics.

5 Demonym of people original from Bogotá, capital city of Colombia.

These sectors of the population have entered the tourism business, usually as tour resellers and boat operators. Others make their living as informal motorcycle taxis, taking advantage of the inefficient public transport, and some rent their motorcycles to tourists. There are also a small number of Colombians from the coast who have joined fishers' cooperatives.

According to boat operators interviewed at the piers, there are too many tour resellers, such that conflicts among them and with tourists are common. They explained that each transport company has a fixed price, agreed by all the boat companies. Resellers are third parties that pay the company, and then profit from adding extra charges to the clients. That is why the price that tourists pay for a tour can vary a lot, and resellers can earn more per trip than what a boat guide earns. Clients often feel scammed, and usually would bargain as much as they can to get lower prices. In addition, because of the high competition, some resellers sub-contract employees in order to reach more people, generating a chain of payments where each one ends up taking a small barely enough to survive. These situations generate conflicts over money, territory, and customers, between resellers.

Several participants, both Continental and Raizals, mentioned a community of *costeños* from *Rincon*, *'Rinconeros'*, as they are called, people from very poor households who moved to San Andrés and have found livelihoods in spearfishing, something in which they are specialists, according to many fishers. They explained that the *Rinconeros* are avid apnea divers that are depleting the fish banks from the coastal zone to supply *'plateros'* to restaurants and hotels. Fishers pointed to the *Rinconeros* for the depletion of lobster, conch and even parrot fish. But *Rinconeros* are not the only problem for the coastal fisheries. Some fishers and two biologists commented that younger generations of Continentals practice spearfishing just as a sport (they noted that Raizals hardly ever use harpoons).

The relationship between the Continentals and the Raizals has historically been tense, especially since many Raizals considered their island invaded by Colombians. Of course, this has major nuances depending on who is asked, but as an example, Raizals call the Continentals *'Panyas'* or *'Pañas'*, short for *'España'* (Spaniards). On the other side, it is common to hear the Continentals claiming that the Raizals are lazy and do not like to work. In any case, during my stay I have not observed major conflicts between the two groups apart from these comments, and the Continentals interviewed did not mention having any kind of resentment towards the Raizals. In a way, this is perhaps to be expected, since Continentals have increasingly molded San Andrés into a Colombian character, and they are now the majority.

There is a tendency among Continental inhabitants to consider San Andrés as Colombia. Thus, their whole vision of the island is based on the idea of territory they have imposed over time, which is more similar to a Continental city than to an insular territory. This causes conflicts with Raizal communities, whose sense of belonging to San Andrés is more organic, a communion between human, land, and sea, which forms an indivisible whole. Many of them perceive the Continental inhabitants as alien to that, a community for which the only value of the territory is economic and accuse them of being responsible for most of the problems in San Andrés. However, there are Continentals whose sense of belonging is similar to that of the Raizals. Beyond these conflicts, most Continentals feel they belong San Andrés, and just want to have a better life, like everyone else, having to deal with exclusion as much as Raizals, although within their own community.

4. Discussion

In the Results section, I have already discussed some of my findings related to landscape changes, population growth, the tourism model, and socio-cultural changes in the local communities of San Andrés. In addition, in this section I will draw on some core concepts of the Political Ecology theory in order to discuss three main topics I consider relevant for the case study. These are (i) the narrative of overpopulation and resource scarcity; (ii) mass tourism, capitalism, and neo-colonialism; and (iii) accumulation by dispossession and marginalization.

4.1 Overpopulation and resource scarcity

The narrative of overpopulation and resource scarcity basically argues that the increase in the human population numbers results in habitats, or even the planet, exceeds their so-called carrying capacity. According to this reasoning, if population growth gets out of control, human societies may consume resources at a quicker pace than the capacity of the planet to replenish them, which leads to resource depletion and scarcity, and thereby to environmental degradation. These processes generate a negative back loop with less available resources for an ever-growing population that eventually produces the collapse of the system.

These ideas firstly drew on the work of Thomas Malthus (1798), and were later revisited by Hardin's Tragedy of the Commons (1968), and then became the basis for the modern

sustainability paradigms with the publication of the report The Limits to Growth by Meadows et al. (1972). The narratives of overpopulation and resource scarcity have been since subject of much debate due of their tendency to blame the poor for environmental degradation and overpopulation, and *"naturalizing inequalities through limits"* (Hendrixson & Hartmann, 2019), but in general they have remained as the preferred explanation of environmental problems for a large part of the world's societies.

In San Andrés, the narrative of overpopulation and resource scarcity is extremely popular. As outlined in the results section, overpopulation of San Andrés is mentioned in many official documents related to sustainable development plans for the archipelago, and it has been argued to be one of the main causes of pressure on natural resources, biodiversity and cultural diversity on the Seaflower Biosphere Reserve (CORALINA, 2007; CORALINA, 2018; Mow et al., 2003; Taylor et al., 2013).

The official numbers show a marked tendency of population growth. Taylor et al. (2013) report a population density of 2444 people per Km², making San Andrés one of the most densely populated islands in the Americas. This information correlates with the population numbers I have obtained from different official sources for 2020. Moreover, it is clear that since 1960, the population has grown exponentially. However, things become messier from 2005 onward. Official numbers differ substantially, usually showing a down-bending of the population growth rate that don't match the projections made for the island for 2005-2045, and given the levels of omissions reported by DANE (2020) and other official reports (Cámara de Comercio, 2020; Secretaría de Planeacion Departamental, 2018), it is clear that there is no knowledge of an exact number of inhabitants, and most likely official numbers fall short.

Overpopulation was considered largely responsible for environmental degradation throughout interviews, mostly regarding freshwater reserves, increased solid waste production, contamination of the soil and shore with sewage, and loss of biodiversity due to over-extraction and deforestation practices. The different social groups had different views of the problem, but in general, Raizals blamed the Colombian residents and migrants, and the Colombian residents blamed other Colombians of lower social classes. These claims support the resource scarcity narrative, as it is evident that perceived environmental problems started after population began to increase. Therefore, there were substantial claims for the need to control population numbers and deport illegal citizens as a way to address environmental and social conflicts in the island.

However, despite what at first glance may be interpreted as a neo-Malthusian approach that heavily relies on the overpopulation narrative, I argue that this is not the case, even if overpopulation of San Andrés may be a fact. My arguments are based on three main aspects. The first one is that population growth has not originated as a natural phenomenon. In fact, population growth of San Andrés has been politically produced. The second issue is that the social group which is pushing for installing overpopulation control as a key for sustainable development of the archipelago, is in fact an ethnic minority that has been suffering the environmental and social effects of population growth. The third issue is related to the increasing number of tourists.

The population growth of San Andrés was not the result of the local population growth, but the product of a deliberate process of population increase by immigration executed by Colombia since the beginning of the twentieth century for different reasons. The decision of colombianize San Andrés by promoting migration of mainland Colombians, followed by the implementation of the free port and later the mass tourism model, as a way of exercising sovereignty over the archipelago and prevent not only territorial disputes with other countries of the Caribbean, but also self-determination of the Raizal communities, resulted in an artificial population growth process in the island (Comisión Interpalamentaria, 1936; Meisel Roca, 2003; Salas Betin, 2015). In this way, systemic migration started the process, and the natural growth did the rest. Thus, the natural resource and environmental problems of San Andrés are rather a product of colonial approaches and neo-liberal development models fostered by a central authority with enough power to decide over the territory (in this case the successive Colombian national governments) than the result of uncontrolled reproduction of low-class inhabitants. Overpopulation is a symptom rather than the cause.

The Raizal community has been particularly affected by the exponential population growth that San Andrés has experienced in the past, which has completely (and maybe irreversibly) modified the island's lifestyle and culture during the last 60 years. The Raizals are recognized as an ethnic minority by the Colombian Constitution. But despite being an ethnic minority in Colombia, they are a minority in their own land. That is why it is not surprising that on an island with around 4,000 inhabitants in 1950, the native islanders claim an extreme overpopulation after observing the number to have raised to at least 65,000 inhabitants today. Now only 37% of the inhabitants are Raizals, and the total number of inhabitants is not known precisely, it is only estimated by approximate projections. The Raizals feel deceived by the Colombian state that has not known or has not been able to find solutions for this situation. For

this reason, I support the idea that the claim made by the Raizal community, the main promoter of the idea of overpopulation and lack of resources, does not have a Malthusian origin. We are facing a case where the inhabitants who have been historically displaced by immigration and neoliberal economic models, are the ones who point to overpopulation as the cause of their struggle. And it becomes extremely notorious, despite many people being cautious about what they say, that there is a resistance of the Raizal people to what they call *'occupation'* of their land, or *'colonization of San Andrés'*. They argue this from a population number point of view, as well as from the socio-cultural implications of those numbers for their community.

However, there is sometimes a hint of segregation in the discourse of some inhabitants when they target the lower classes, or the *'costeños'*, accusing them of being illegal residents, of promoting drug addiction and violence, or of having high indices of birth rate. This is more evident within the resident community of Continental origin, where a great division by socio-economic class prevails. In addition, the strategies to deal with the high population, such as the creation of the OCCRE, generate distrust among the Continental population, causing major omissions in censuses to avoid prosecution, and generating counter accusations within the community, as each one tries to defend their position and blame others.

While the high population becomes a problem for islanders, the number of tourists continues to grow at high rates year after year, since it is the industry that mainly moves the economy of the island and attracts a special interest both of the state and private companies. These numbers, which can reach more than fifteen thousand tourists per day on the island, are added on top of the local population. Hence, local inhabitants claim that tourism consumes resources, but this does not translate into economic benefits for the islanders. Much of the claim for the resource scarcity is sustained by the high number of visitors that add pressure on ecosystems and natural resources.

In any case, sometimes it is not only a matter of assigning responsibility to the number of people, but of seeing how access and resource management are carried out. For example, Velásquez (2020) shows that the Raizals from *La Loma* receive water from the aqueduct, whereas the new water desalination plant supply the hotel sector, despite the fact many Raizals claim to be dispossessed from the resource. But access to the water resources is absolutely unequal. While in the rural sector the water service is very inefficient, in the tourist sector water is available 24 hours a day. Guerrero Jiménez (2019) claims that the consumption of the tourist population of the water resource is not higher than the average consumption of the local

inhabitants, but on an island where access to water is a problem, the uneven distribution of opportunities in favor of tourists who use resources that are not available to the inhabitants, generates a deep conflict. In the same way, an official report from CORALINA (2009) about the state of the aquifer, showed the availability of water remains withing the boundaries of natural recharge. But it also informs how many private companies have concessions for exploitation of the aquifer, and most of these companies extract water and sell it in the urban area using tank-trucks. Something similar happens with the claims of contamination by sewage. The increase in contamination of the aquifers is explained more by the almost non-existence of a sewage system, than exclusively by a population issue. If there were a functional sewage system, contamination would be much lower, and the aquifer that provides the drinking water would not be contaminated, increasing the amount of the usable resource. Special mention should also be made of the submarine outfall that expels untreated water into the ocean, generating a potential negative impact due to excessive organic matter, chemicals, and bacteria thrown into the sea.

In addition, tourist activities that add pressure on ecosystems, besides the number of people participating in those activities, are largely related to the type of tourism proposed. The ecological sustainability of the tourism model in San Andrés is almost non-existent, and what predominates is an 'extractive' vision of tourism. I mean 'extractive' in the sense that they engage in consumptive activities that are carried out in most cases without concerns about the negative effects generated on the environment.

All these sources of impacts add up and generate pressure and conflicts over the natural resources in the island, where population numbers play a central role. However, usually problems can be also explained from other angles, where the population is just one component of a system full of inequalities where some reap the benefits, while others face the negative consequences.

4.2 Mass tourism, capitalism, and neo-colonialism

The events that occurred in San Andrés throughout the 20th century and more especially since 1960, have determined an economic development model based on mass tourism that accounts for approximately 46% of the job offer (hotels, restaurants and commerce) (CDM Smith INC, 2016), and means 95% of the department's GDP (Baine et al., 2007). Due to the way economic and socio-cultural changes have taken place in the island, it is possible to draw a parallel

between the case of San Andrés and the Caribbean countries where the mass tourism model has become a colonial legacy, in the form of neo-colonialism.

Williams (2012, p. 191) mentions that *"neo-colonialism takes power from the local and regional levels and concentrates it in the hands of foreign owned companies."* and argues that in the Caribbean this is a common phenomenon, where power and wealth are not held by local inhabitants, but rather belong to foreign entities, as is generally the case with the mass tourism model.

The case of San Andrés is constituted as a special case, since the archipelago never existed in the form of a country, but the islands passed from Briton dominion to Spaniard dominion, and then to be part of the Republic of Colombia, having maintained a substantial autonomy until the beginning of the 20th century. Therefore, San Andrés has not been a colony followed by an independence process. In any case, the relative autonomy through which the archipelago passed, ended when Colombia decided to include San Andrés in their geopolitical strategy, due to the existence of valuable marine resources, and because of its proximity to Caribbean countries that had intentions of annexing the territory. The creation of the Municipality of San Andrés, the first processes to promote migration, the programs to Colombianize the island, and the promotion of migration of people as a way of exercising sovereignty, are the precursors of neoliberal economic development. that would take place from the mid-1950s onwards.

The collapse of the coconut-exporting economy was used by the national government to start developing tourism under the modality of the free port in 1959 (Meisel Roca, 2003). Sealy (2018) argues that the neoliberal expansion processes in the Caribbean region since the 1960s meant a change from the models of economic and social development based on agriculture, towards liberal economies oriented to markets, among which we find tourism. According to Harvey (2005, p.2), neoliberalism is a form of capitalism *"characterized by strong private property rights, free markets, and free trade. The role of the state is to create and preserve an institutional framework appropriate to such practices".*

This was precisely what happened in San Andrés since the implementation of the free port; there was an explicit plan promoted by the National State to constitute the island as a commercial port for imports with a neo-liberal approach (Congreso Nacional de Colombia, 1912; Poder Ejecutivo de la Republica de Colombia, 1953). In this way, I see very little difference between the free port and the mass tourism models. Both models are based on tourism. The free port aimed to bring people to the island for tax-free shopping tourism, which

gradually incorporated leisure tourism with the popularization of the narratives of paradise beaches, such as the *'sea of seven colors'* in the 1980s. With the collapse of the free port, only the 3S's of mass tourism (sun, sea, and sand) remained as the only industry that would support the economy.

But this type of economy did not exist in San Andrés before. The society was simpler (or primitive, to the eyes of the neo-liberals), and the economy was based on agriculture and small-scale fisheries. This is another important aspect of neo-liberal practices; if there are no markets for neo-liberal development models to grow, then markets must be created, even with the intervention of the state if necessary (Harvey, 2005, p. 2). Since no markets existed for land or products, the state created a law of exemption of taxes for products and allowed land-grabbing by promoting privatization of land through evictions, expropriations, and prescriptive acquisition processes, all in the name of the economic development that was supposed to bring progress and stability to the islands and help local communities. The state even provided the infrastructure necessary to set the free port to work, which is the same infrastructure nowadays used by the tourism industry (airport, wharf, routes, and buildings).

These neo-liberal models were presented by the Colombian state as a 'win-win' situation. The free port would recover the island's economy, it would serve for the geopolitical purpose, it would generate jobs for local inhabitants and tourism for the citizens. But what it caused is a redistribution of power from the local communities to the private interests that invested in the new economy. The revenues were for the owner of the free port, while the islanders remained poor, or in the best of cases, making a living marginal surplus resulted from commercial activities. The mass tourism era that came after inherited these dynamics. Today 48% of the island's population is considered poor according to international wage standards (Baine et al., 2007), while there are international firms and hotel chains, whose owners and CEOs do not live in the island, that obtain high profits the tourism business. Moreover, many interviewees reflected on this and asked; *'is this progress? is this the so-called development?'*. Especially for elder Raizals, the processes San Andrés has been subject to, far from improving the quality of life, have eroded the foundations of society, in economic, social, and ecological terms. The Raizals do not feel as winners, but rather as losers against foreign power.

Today, the dependence of San Andrés on tourism is almost total. The mass tourism model has imposed and almost completely dictates the pace of the island. The industry has in some way commodified nature, in the form of romantic narratives of paradise that attract visitors for short

term vacations whose interests are not much related with the ecological and cultural values that the island holds as part of the Seaflower Biosphere Reserve, but rather with fast, superficial experiences of consumption of the fantasy of an exotic seascape. In this sense, San Andrés has never been able to embrace Seaflower and occupy its place as an important portion of land that contains key ecosystems and incommensurable cultural values in the communities that inhabit it. On the contrary, apart from the Raizals (and not even all of them), most part of the rest of the society, and also the visitors, are blinded by the vision portrayed as a result of the neo-liberal tourism approach.

However, this does not mean that there are no positive experiences happening in the island. There are many people who work in changing the reality of the island. Some experiences such as, the *Old Point Regional Park*, or the sustainable management plan for the *Johnny Cay Regional Park* are really positive and demonstrated that there is room for improvement on how the island exercise the tourism model. Also, the *Native Lodge Initiative* has provided an invaluable experience as a bottom-up reaction to the power of big hotel chains, and even this is not enough to produce a visible change yet, the sole idea that tourism could be compatible with a cultural and responsible experience, raises hope among the people who argue for deeper changes in how people understand the territory and the people it contains.

4.3 Land grabbing and marginalization.

The social, cultural, and economic changes experienced in San Andrés since the implementation of the free port in 1959 are closely related to the concepts of land grabbing, accumulation by dispossession, and marginalization. These phenomena are the result of the neo-liberal and neo-colonial approaches to the territory and have affected not only the Raizal community, but also the successive waves of immigrants that arrive in the island during the last 60 years.

Land grabbing processes involve the acquisition of land by different illegal means from smallholders who did not agree to transfer their property, to transnational capitals, usually involving displacement and eviction of inhabitants (Cochrane, 2016). In addition, the concept of accumulation by dispossession developed by Harvey (2003), draws upon the idea that the systematic accumulation of entitlements and rights, produces commodities and thereby generates markets to absorb accumulated capital.

The process of change in land tenure in San Andrés that started in the late 1950s is compatible with these ideas. As explained in the results section, the need of land both by the Colombian state and private investors to develop the free port, resulted in controversial methods for land acquisition that took advantage of the informal land property system of the Raizal inhabitants, which were also victims of the pressure of economic powers with which they were not familiar. I regard this as a clear example of land grabbing, and the mechanism is straightforward. The state wanted to organize San Andrés as a free port, therefore needed land to build the infrastructure. The Raizal community owned all the land in in island, distributed between the different existing families. This necessarily meant that the state had to buy or expropriate land for their purpose, generating the first displacements of Raizals, and putting prices on land. Then followed land acquisition by private actors to build hotels and shops. These generated a market for land and increased the cost of living, forcing the local communities away from the north of San Andrés, and many places near the coast. This is not only a past phenomenon, since Raizal families still lose the tenure of their land, either because they do not possess the formal entitlements, or because they cannot stand against pressures for selling given their economic vulnerability. Around 48% of the land does not belong to Raizals in the current time (Observatorio Seaflower, n/a). This constitutes an example of accumulation of capital, first by investors in the free port, and later by hotel companies, through the dispossession of the Raizal community of their ancestral lands, which also resulted in the gradual reduction of agricultural land, in combination with the disappearance of places with spiritual and religious values.

Not only did the Raizal communities gradually lose the property of land to private tourism and commerce investments, they also became excluded from the society as the population of Continental inhabitants outnumbered them and imposed a Colombian character to the island. Thus, the imposition of an economic model based on the free port and tourism, the loss of lands due to land grabbing, and the socio-cultural exclusion produced the marginalization of part of the Raizal community, enhanced also by the increasing population, expansion of urban settlements in the rural areas, and increasing pressure on the natural resources of the island. In addition, the positioning of tourism as the main economic driving force of the island, resulted in the abandonment of traditional livelihoods such as agriculture and fishing, becoming the communities highly dependent on the jobs generated by tourism. This becomes the communities highly vulnerable since there are almost no other options than to work in some tourism-related venture, which has been problematic for Raizals due to the conflicts with the Continental communities who usually own the businesses. Continental migrants from the lower

socio-economic classes also suffer from marginalization in a similar way Raizals do. They are relegated to the least paid jobs, or to work in the informal economy in order to survive.

The marginalization of the local communities is also enhanced by the infrastructure problems resulted from the historical development of the island. The lack of an aqueduct and sewage system, for instance, adds up on the already impoverished population, especially in the rural area. In the case of drinking water, the "solution" the island has found is more privatization. People of San Andrés are forced to resort to buying bottled water in order to survive. There are even obscene examples of water dispenser or ATMs which demonstrate how internalized is the fact that drinking water, a basic need for humans, is a private good for sale in supermarkets.

Marginalization of the communities leads to desperate measures of some inhabitants in order to thrive if they cannot find their way into the tourism sector. This is what sometimes leads to the over extraction of resources, such as overfishing of the shore waters, increased pressure on some species with high economic value like the black crab, conch and spiney lobster, and expansion of the agriculture frontier that generates deforestation. Again, these practices may lead to the conclusion that poverty causes environmental degradation, but this is not accurate. It is marginalization, in this case produced by phenomena of neo-liberal development involving land grabbing and accumulation by dispossession that forces people into unsustainable practices in order to survive.

5. Conclusion

The expansion of mass tourism since the 20th century has resulted in small Caribbean islands experiencing significant socio-economic and ecological changes as they became popular holiday destinations, often portrayed as "natural paradises". The archipelago of San Andrés, Providencia y Santa Catalina, a territory encompassed inside the Seaflower Biosphere Reserve, with more than 60.000 inhabitants, and a particular history of tax-free port and tourism, has been subject to debate due to its high population and the increased number of visitors in relation with its surface area. As a result of my preliminary inquiries, I became interested in exploring the influences of the development models based on the free port and mass tourism on the social and ecological conditions of San Andrés Island, the most populated and visited of the archipelago. More specifically, I was interested in researching the role of the free port and tourism models in relation to population growth and possible connections with neo-colonial

phenomena, and investigate how these have affected the livelihoods and culture of the Raizal and Continental (South America) communities, and the environmental conditions of the island, in either positive or negative ways.

In order to do that, I decided to i) investigate the processes that contributed to population growth, both local and floating, and their effects as perceived by the local communities, ii) explore the positive and negative effects of the urban and tourism infrastructure expansion, and the potential connections between them and phenomena of land use and land tenure changes, as well as environmental degradation and natural resource depletion, and iii) analyze the perceived changes in livelihoods, culture, customs, and traditions by the communities, and their connection with negative consequences such as marginalization and exclusion, as well as positive effects such as cultural integration, and promotion of the local culture and traditions.

This study shows how historical, political, and external factors have played important roles in shaping territories and exerting a major influence that is generating negative social and ecological outcomes for local communities. It is necessary to consider the long-term consequences of political and economic decisions and processes, to prevent further social and environmental injustice.

San Andrés has been subject to large-scale changes, especially in the last 60 years, as a result of the efforts for colombianize the island through the implementation of a free port model. Major infrastructure projects, to prepare the territory in order to operationalize the port, constituted the first interventions that modified the landscape in irreversible ways, producing severe ecological damage in key areas of the island, as well as the first documented cases of land grabbing and displacement of local inhabitants. The success of the free port produced the expansion of the commercial urban area, which incorporated hotel buildings of the emergent tourism industry. This caused the privatization of the shoreline to accommodate tourism activities, the expansion of the tourism areas into the rural sectors, and the creation of markets for land that shifted the land property from Raizals to private investors through controversial methods in connivence with the national and local governments. The expansion of the tourism infrastructure generated a process of displacement of people to other sectors of the island, especially the rural area, which increased the pressure on natural resources.

Access to drinking water is a special problem in San Andrés. Historically, Raizals relied on wells to extract water from the aquifers and on rainwater harvesting systems. But the processes of urbanization and the increase in the population have caused over-extraction of water from

the aquifer and contamination with sewage in large portions of the island, and hinder the implementation of rainwater collectors. Moreover, the aqueduct and sewage systems were conceived specially to supply the urban, touristic area. The virtual inexistence of an aqueduct system for the rural sector, determines that people outside the urban area, mostly Raizals, only have access to water for some minutes, with gaps of days or weeks, while the tourist areas of the north have service 24hs. Local inhabitants perceive that there is a prioritization of the tourism industry over the basic needs of the local population, who have to resort to buying drinking water in supermarkets and to private resellers. Other issues related to public services, such as the lack of a sewage system outside of the urban area, the expel of untreated sewage to the sea, and the increasing accumulation of solid waste, generate negative ecological impacts and resentment in the communities, who blame the excessive number of tourists, but also the high population numbers of the island for the problems.

Population growth is central to understand most of the changes that have been occurring in San Andrés since the free port was officially launched in 1959. Local communities, both Raizal and Continental, claim San Andrés is overpopulated and denounce that there has been no effective solution to the problem, or no interest in addressing it. The data analyzed from multiple sources clearly show that the high population numbers in current times are the result of deliberate migration of people from mainland Colombia to the island in coincidence with the beginning of the free port. Migration of Colombians to San Andrés was promoted and encouraged since the beginning of the twentieth century by the national government in an attempt to colombianize the archipelago and exert sovereignty over a territory that was disputed by other Caribbean nations. The free port development model was used as a vector to accelerate population growth, and was later replaced by the mass tourism industry which continued the tendency. Raizals were the most affected, since they became outnumbered by Continental residents who imposed their Latin American culture, Spanish language, and Catholic religion, leading to the cultural exclusion of the Raizals, whose culture was a mix of British and Afro-Caribbean, with creole and English language, and Protestant religion. The attempts to control the overpopulation, consisting essentially in controlling the access of Colombian citizens and extending residence permits, have not had a positive effect, and the problem continues. Moreover, there is no agreement on the actual number of inhabitants, since all censuses carried out reported high degrees of omission. Therefore, all policies and State programs are often based on projections. Reported impacts of the overpopulation are related to the depletion of natural resources, expansion and high density of urban settlements, deforestation, water

scarcity, and contamination with sewage and garbage of an island that has exceeded its carrying capacity, in the view of local communities. On top of the resident population, an increasing tourist population adds even more pressure on the island's systems. This is a phenomenon fostered by private actors and the local and national governments, which see a way out of economic struggles by increasing the volumes of the tourism industry.

The characteristics of the tourism sector are correlated with the mass tourism model offered in the island. Visitors are in general disconnected with the local dynamics of San Andrés. Almost all tourists that arrive in the island have leisure as the main purpose of their travel, and primarily seek for 3S's of tourism (sun, sea, and sand). In most cases, they choose to stay in the north of the island in hotels, all-inclusive hotels, or apartments, and are not familiar with environmental or social problems in the island. Moreover, most of visitors have not heard about the Seaflower Biosphere Reserve before or even during their stay. Activities in which tourists engage are those mainstream oriented to the seascapes, such as tours to the several Cays, jet ski, parasail, and diving. In this sense, there are almost no alternative options for ecotourism or ethno-tourism, apart from the two regional parks managed by CORALINA. Tourism in San Andrés has been characterized by many locals as a "predator", referring to the large numbers of visitors who consume resources from the islands, and engage in activities without any respect for the place in where they are, often incurring in undesired practices that contribute to environmental degradation, such as trampling on corals, littering the beaches, or disrupting the local lifestyle with loud music. Perhaps the only example of a responsible model of tourism is the *Native Lodge Initiative*, a network of traditional Raizal inns where visitors share apartment with native families and produce an interesting cultural exchange, learning some of the local customs and traditions, while contributing to Raizal household's economies.

Overall, these cumulative processes produced important changes for the Raizal community, and also for the Continental community in San Andrés. The imposition of a development model, the loss of land tenure rights in favor of private and public actors, and the process of acculturation carried out with the colombianization of the islands, determined that the Raizals perceive their ancestral culture to be disappearing. Major changes of livelihoods have happened in the last 60 years, with the abandonment of fishing and agricultural practices, and the gradual marginalization of those who could not participate in the tourism economy or the public administration. In addition, the Continental communities, especially from lower social classes, also became victims of marginalization, since many of them are low-skilled workers who could not find the sought livelihoods and were relegated to live in shanty towns and work in low paid,

unstable positions. Issues such as population growth, but also proliferation of violence and drugs, have resulted in a divided society between Raizals and Continentals, the former who argue in favor of their ancestral rights and more autonomy to decide over the territory, and the latter who see the island just as part of Colombia.

The processes of colombianization of San Andrés, and the free port and mass tourism development models, are paralleled with neo-colonial processes that shift power from the local level to concentrate it in higher power spheres, usually foreign companies. This has been the case of many Caribbean nations with a colonial past. However, in the case of San Andrés, the archipelago had maintained a relative autonomy and had not been paid much attention until the political decision of colombianize San Andrés was made. This means the island was victim of an internal process with neo-liberal character, where an economic model was politically imposed to an indigenous community that did not share common values with the country that they were part of. These two development models were presented as win-win situations, but actually served for the geopolitical purpose, and also benefited the private sector that acquired land and created markets for commerce, while the majority of the local inhabitants were gradually induced to poverty. In actual effect, this is a win-lose model.

The narrative of overpopulation of San Andrés may sound as Malthusian, but it is actually far from that. The difference in this case is that while Malthus developed the concept and used it to make the poor accountable for resource scarcity and environmental degradation, in San Andrés it is the ethnic minority, the Raizals, who claim the island is overpopulated as a result of political decisions to deliberately populate the archipelago for geopolitical and economic purposes.

Finally, the processes of land grabbing that took place as a result of the imposition of the free port model, were nothing else than a case of Accumulation by dispossession. Raizals were dispossessed, and are still being dispossessed from their land, and that land acquired was used to generate a marked for land, and markets for the trade of tax-free products. But the Raizals could not participate in the free port, the were not usually welcome because of cultural differences. The gradual marginalization of the Raizal community, and the later marginalization of the low-class Continental community, on produced a back loop of more marginalization, in an island that heavily relies on the tourism-related activities.

Future research

The current situation of social, economic, and environmental problems in San Andrés, introduce many questions regarding what future steps could be taken in order to mitigate this situation. In an island where half of the inhabitants live below the line of poverty, and depends largely on the revenues generated by tourism, the uncertainties of the future may increase the vulnerability of the local communities. Potential decline of tourism, and climate change, among others, could cause the main economic activity to disappear, leaving many people without a livelihood. Recently, the COVID-19 pandemic served as a test, and it was clear that those who had diversified livelihoods, even those considered poor, could thrive during eight months of lockdown, by shifting to fishing activities and subsistence agriculture, whereas the productive tourism and commerce sector, and the people that indirectly relies on these, suffered major economic consequences.

The archipelago of San Andrés, Providencia y Santa Catalina, is part of the Seaflower Biosphere Reserve since it was declared in 2000. More than 20 years after, a set of Marine Protected Areas with a participative approach have been successfully created. However, due to the special characteristics of the population of San Andrés, and the cultural, economic, and social dynamics that take place in the island, a large proportion of the local communities have not yet embraced Seaflower as part of their identity. Unfortunately, recent legal disputes with Nicaragua have resulted in Colombia losing a majority of the seaside portion of the Reserve, and the future of the marine resources involved now depend on the two countries reaching an agreement on a bi-national Reserve.

It is therefore of vital importance that San Andrés should improve the social and environmental state of the island. Seaflower is still a word used for marketing campaigns, but it usually associated with the marine part of the Reserve. However, the land portion of territory, and most importantly, all the inhabitants that live there, are also supposed to be part of Seaflower. New forms of development and territorial planning, and new forms of tourism and diversified economic activities, such as ecotourism, ethno-tourism, improved fisheries and agriculture, and new approaches such as gastronomy, music and arts, may be needed in the future to engender the social and ecological sustainability of San Andrés.

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