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DÉBORA GOES URANO

**TOURISM AND ENVIRONMENTAL CRIMES: A CRITICAL ANALYSIS OF THE
ENVIRONMENTAL IMPACTS OF TOURISM THROUGH THE LENSES OF GREEN
CRIMINOLOGY**

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Thesis presented to the Graduate Program in
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mandatory requirement for the PhD title, under
the research line Tourism and Regional
Development.

Supervisor: Prof. PhD Wilker Ricardo de
Mendonça Nóbrega

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To all of those who have lost their lives
fighting for the life of Mother Earth.

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A lot has been said that getting a PhD is a very lonely and very painful process. In reality, the writing process is a lonely journey. It is when you are immersed in your thoughts trying to connect all the data you collected with the knowledge you have acquired to make new associations which need to make sense in the complexity of the world. This is a non-linear process. Sometimes you are moving forward and sometimes you need to retreat. Sometimes you go to the data, other times you go to the theory, and there are times that you need to move away from it all to gain other perspectives. However, even though the writing process can be rather lonely sometimes, this research could have not been done without the participation of several people. In this sense I would like to acknowledge some people who were crucial to the process and conclusion of my PhD research.

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ABSTRACT

Environmental crime is a worldwide complex problem, and one of the most profitable international criminal activities. Although the environmental impacts of tourism have been explored, there are few studies in tourism literature on environmental crime in the past 60 years. In this sense, this thesis aims to elucidate one central question: “What is the relationship between environmental crime and tourism?”. Both Critical Tourism and Green Criminology are used as an umbrella theoretical framework which guided the research process. The research is based on the dialectical scientific method and navigates through different research approaches and techniques. The thesis was divided into three moments; in the first moment, it is intended to understand how the Tourism and Green Criminology fields interconnect in the literature. Next, bibliographic research demonstrated that tourism research on the nexus tourism-environment has had little critical progress over time. In addition, it reinforced that tourism from a local perspective does not need a healthy environment to happen, and critically, researchers need to think globally, perceiving that the focus should not be in sustaining tourism, but to preserve the ecological basis of the planet. Furthermore, it proposed a theoretical framework based on Green Criminology that can help researchers to critically approach environmental impacts of tourism which focus on the structures and mechanism of oppression that allow these impacts to happen. In the second moment, it attempted to identify the patterns of tourism-related environmental crimes. To do so, secondary data analysis of environmental infraction notices issued in Brazil, semi-structured interviews and a discussion of Brazilian environmental legislation and environmental law structure were conducted. The analysis was based on descriptive statistics and content analysis. The results showed that tourism-related crimes were connected to non-compliance with the environmental license for construction and operation (among other factors), especially in permanent preservation areas and indigenous territories; deforestation; irregular fishery commercialization, which relates to illegal fishing; and illegal captivity of wildlife. Lastly, the third moment tried to understand the processes involving tourism-related environmental crime. In this moment I employed the study-case technique of one of the main tourism-related environmental offenders in the state of Ceará, Vila Galé, located in Cumbuco, one of the main tourist destinations of the state. The results revealed that many of the tourism-related environmental crimes studied were State-facilitated corporate crimes. Moreover, the State, corporations, and the media try to legitimize these crimes and undermine environmental social control through discourses of economic growth. In addition, there is a power imbalance between native residents and big corporations when environmental law enforcement is put in place. Finally, the thesis demonstrated that Green Criminology could help tourism researchers to perceive that most of the so-called environmental impacts of tourism are now perceived as crimes and the main victim is Mother Earth. Also, Green Criminology gives tools to tourism researchers to approach the impacts of tourism in the environment through understanding the processes behind these crimes and exposing a whole system which sustains the relationship tourism has with the natural environment.

Keywords: Critical Tourism. Environmental crimes. Green Criminology. Tourism.

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RESUMO

Crime ambiental é um complexo problema mundial e uma das atividades criminosas internacionais mais lucrativas. Embora os impactos ambientais do turismo tenham sido explorados, nos últimos 60 anos, há poucas pesquisas na literatura de turismo sobre crimes ambientais. Nesse sentido, esta tese visa elucidar uma questão central: “qual a relação entre crimes ambientais e turismo?”. Tanto o Turismo Crítico quanto a Criminologia Verde são usados como um arcabouço teórico que orientou o processo de pesquisa. A pesquisa é baseada no método científico dialético e navega por diferentes abordagens e técnicas de pesquisa. A tese foi dividida em três momentos. No primeiro momento, buscou-se compreender como os campos do Turismo e da Criminologia Verde se interconectam na literatura. Por meio de pesquisa bibliográfica, demonstrou que a pesquisa em turismo sobre o nexo turismo-ambiente teve pouco progresso crítico ao longo do tempo. Além disso, reforçou que em uma perspectiva local o turismo não precisa de um ambiente natural saudável para acontecer e, criticamente, os pesquisadores precisam pensar globalmente, percebendo que o foco não deve ser a preservação do turismo, mas a preservação da base ecológica do planeta. Além disso, é proposto um quadro teórico baseado na Criminologia Verde que pode auxiliar pesquisadores a abordar os impactos ambientais do turismo de forma crítica, com foco nas estruturas e mecanismos de opressão que permitem que esses impactos aconteçam. No segundo momento, buscou-se identificar os padrões de crimes ambientais relacionados ao turismo. Para tanto, foram realizadas análises de dados secundários de autos de infração ambientais lavrados no Brasil, entrevistas semiestruturadas e discussão da legislação ambiental brasileira e da estrutura de combate ao crime ambiental. A análise foi feita por meio de estatística descritiva e de análise de conteúdo. Os resultados mostraram que os crimes relacionados ao turismo estavam ligados, entre outros, ao descumprimento da licença ambiental para construção e operação, principalmente em áreas de preservação permanente e territórios indígenas; desmatamento; comercialização irregular de pescado, que está ligada à pesca ilegal; e cativeiro ilegal de animais selvagens. E no terceiro e último momento, buscou-se compreender os processos que envolvem o crime ambiental relacionado ao turismo. Utilizou-se a técnica de estudo de caso de um dos principais infratores ambientais relacionados ao turismo no estado do Ceará, Vila Galé, localizada em Cumbuco, um dos principais destinos turísticos do estado. Os resultados revelaram que muitos dos crimes ambientais relacionados ao turismo que foram estudados eram crimes corporativos facilitados pelo Estado. Além disso, por meio de discursos de crescimento econômico, Estado, corporações e mídia tentam legitimar esses crimes e minar a fiscalização ambiental pela sociedade. Além disso, há um desequilíbrio de poder entre os moradores nativos e as grandes corporações quando a aplicação da lei ambiental é implementada. Por fim, a tese demonstrou que a Criminologia Verde poderia ajudar os pesquisadores do turismo a perceber que a maioria dos chamados impactos ambientais do turismo são agora percebidos como crimes e a principal vítima é a Mãe Terra. Além disso, a Criminologia Verde fornece ferramentas para pesquisadores do turismo abordarem os impactos do turismo no meio ambiente, através da compreensão dos processos por trás desses crimes e expondo todo um sistema que sustenta a relação do turismo com o ambiente natural.

Palavras-chaves: Turismo Crítico. Crimes ambientais. Criminologia Verde. Turismo.

LIST OF ABBREVIATIONS

ACP – Civil Public Action (*Ação Civil Pública*)

BP – British Petroleum

CADINE - Defaulters Registry of the State Public Treasury (*Cadastro de Inadimplentes da Fazenda Pública Estadual*)

CAPES – Brazilian Federal Foundation for Support and Evaluation of Graduate Education (*Coordenação de Aperfeiçoamento de Pessoal de Nível Superior*)

CONAMA - National Environmental Council (*Conselho Nacional de Meio Ambiente*).

CTF - Federal Technical Register (*Cadastro Técnico Federal*)

FUNAI – National Indigenous Foundation (*Fundação Nacional do Índio*)

IBAMA - Brazilian Institute of the Environment and Renewable Natural Resources (*Instituto Brasileiro de Meio Ambiente e Recursos Naturais*)

ICMBIO - Chico Mendes Institute for Conservation and Biodiversity (*Instituto Chico Mendes para a Biodiversidade e Conservação*)

IMAC – Environmental Institute of Caucaia (*Instituto Ambiental de Caucaia*)

INTERPOL - International Criminal Police Organization

IPCC - Intergovernmental Panel on Climate Changes

IPHAN - National Historical and Artistic Heritage Institute (*Instituto do Patrimônio Histórico e Artístico Nacional*)

LAC - License by adherence and commitment (*Licença por Adesão e Compromisso*)

LCA - Environmental Crimes Act (*Lei de Crimes Ambientais*)

MMA - Environmental Ministry of Brazil (*Ministério do Meio Ambiente do Brasil*)

MPCE – Ceará State Prosecutor's Office (*Ministério Público do Ceará*)

MPE – State Prosecutor's Office (*Ministério Público Estadual*)

MPF - Federal Prosecutor's Office (*Ministério Público Federal*)

OABCE - The Brazilian Bar Association - Sectional Ceará (*Ordem dos Advogados do Brasil – Seccional Ceará*)

PCCE – Ceará State Police (*Polícia Civil do Ceará*)

PF – Brazil Federal Police (*Polícia Federal do Brasil*)

PGFN - Attorney General of the National Treasury (*Procuradoria Geral da Fazenda Nacional*)

PMCE – Ceará State Military Police (*Polícia Militar do Ceará*)

PND - National Development Plan (*Plano Nacional de Desenvolvimento*)

PNMA - National Environmental Policy (*Política Nacional de Meio Ambiente*)

PPGTUR - Tourism Graduate Program (*Programa de Pós-Graduação em Turismo*)

SECULT – Municipal Secretary of Tourism and Culture of Caucaia (*Secretaria Municipal de Turismo e Cultural de Caucaia*)

SEMACE – Ceará State Environmental Superintendence (Superintendência Estadual do Meio Ambiente do Ceará)

SISNAMA – National Environmental System (Sistema Nacional de Meio Ambiente)

UFRN – Federal University of Rio Grande do Norte (*Universidade Federal do Rio Grande do Norte*)

UNICRI - United Nations Interregional Crime and Justice Institute

UNEP - United Nations Environment Programme

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1. INTRODUCTION

Environmental crime is often understood as a collective term used to “describe illegal activities harming the environment and aimed at benefiting individuals, groups or companies from the exploitation of, damage to, trade, or theft of natural resources” (Nellemann *et al.*, 2016, p.7). There are a wide range of environmental crimes which take place around the world and there are many ways in which they have been categorized by researchers (for instance, see Carrabine, Cox, Lee, Plummer & South, 2004; White, 2008; Brisman & South, 2018) and by institutions (such as the International Criminal Police Organization – INTERPOL, 2020; United Nations Environment Program – UNEP, 2018; Brazilian Institute of the Environment and Renewable Natural Resources - *Instituto Brasileiro de Meio Ambiente e Recursos Naturais - IBAMA*, 2014), and they include crimes related to fishery, forestry, pollution, wildlife, food and agriculture.

It is one of the most profitable international criminal activities. Although there is a lack of official statistics, environmental crime was estimated to be worth US\$91-258 billion in 2016 (Nelleman, et al., 2016). Moreover, it is increasing between 5% and 7% annually, which represents 2 to 3 times the rate of the global economy according to a report from UNEP and INTERPOL (Nelleman, et al., 2016). From this total amount, it is estimated that about 10% is revenue loss of the governments, which means a loss of US\$9-26 billion which could be used by governments to support local development. In addition to the destruction of our health and well-being, as well as economic loss, in some cases environmental crimes have been funding non-state armed groups, terrorism and driving conflicts (Nelleman, et al., 2016). Based on this information, UNEP points out that environmental crimes need to be recognized by the international community as a severe threat to peace and sustainable development. Thus, environmental crime is a worldwide and complex problem because of the diversity of activities, impacts, and actors involved, as well as due to its transboundary nature and its connection to other serious crimes (UNEP, 2018).

This type of crime is also relevant in the context of large-scale environmental crime episodes (often addressed as environmental disasters) caused by big corporations, which leave a vast trail of destruction and not only victimize the physical environment and non-human animals, but also human animals in a diversity of ways which goes from economic to social impacts, including health problems, injuries, and deaths. For instance, some well-known episodes can be cited such as the toxic gas leak at the Union Carbide plant in Bhopal, India, in 1984, and the British Petroleum oil spill in the Gulf of Mexico in 2010. There was some recent

episodes in Brazil such as the dam rupture in Mariana in 2015, the dam rupture in Brumadinho in 2019, both in the State of Minas Gerais, and the oil spill along the Brazilian Northeast coast in 2019.

Just to have an overview of the impacts of these crimes, according to IBAMA Preliminary Technical Report of November 2015 regarding the Mariana case, the *Fundão* dam rupture spilled iron mining tailings and destroyed 1,469 hectares along 77 km of watercourses, including permanent preservation areas and native vegetation of the Atlantic Forest. In addition, it changed the quality standards of fresh, brackish, and saltwater; caused the death of aquatic biodiversity and terrestrial fauna; silted up watercourses; caused habitat loss and fragmentation; and restricted or weakened ecosystem environmental services. Also, the impacts have the potential to cause chemical disruption and soil alteration over time, hindering species recovery and development (IBAMA, 2015).

It also caused several socioeconomic impacts such as: (1) the deaths of company workers and residents of affected communities; (2) population displacement; (3) devastation of localities and the consequent disintegration of the social bonds of the communities; (4) destruction of public and private structures (buildings, bridges, streets, etc.); (5) destruction of agricultural areas and pastures, with loss of economic revenues; interruption of electricity generation by affected hydroelectric plants (*Candonga*, *Aimores* and *Mascarenhas*); (6) interruption of water supply; (7) interruption of fishing indefinitely; (8) interruption of tourism; and (9) a sense of danger and helplessness in the population (IBAMA, 2015). After more than three years, 25 fines were imposed by IBAMA in the total amount of R\$350.7 million (US\$88.9 million)¹, as well as 73 notifications for conduct regulation. In addition, 22 people and 4 companies are being prosecuted for the environmental damage caused by the dam rupture, 21 of which are being prosecuted as murder (G1, 2019).

A little more than four years later, the rupture at the *Córrego do Feijão* dam in Brumadinho degraded 112 hectares of native forest and contaminated 305 kilometres of the Paraopeba River with iron oxide, manganese, copper, and chrome, making it impossible to consume water for multiple uses. According to information from the Paraopeba Expedition of the SOS Atlantic Forest Foundation, it also victimized about 300 people (Câmara dos Deputados, 2019).

¹ US dollar exchange rate is equivalent to the 2019 annual average of R\$3.9445 according to IPEADATA (2022).

The oil spill in the Brazilian Northeast reached more than one thousand localities between August of 2019 and March of 2020. Although many of the studies published are still preliminary, some impacts of this crime were already observed such as the contamination of volunteers who helped clean the beach and had direct contact with the crude oil stains, contamination of fishing resources, and decrease in the sale of fish and shellfish (Araújo, Ramalho, & Melo, 2020). The Federal Police of Brazil (2021) concluded the investigations in 2021, stating that a Greek-flagged oil tanker was the responsible for the release of the substance. The company and its legal representatives were indicted for committing crimes of pollution, breach of environmental obligation and damage to conservation units. The costs of cleaning beaches and the ocean were estimated to be more than R\$188 million (US\$34.8 million)² (Polícia Federal do Brasil, 2021).

In addition to these large-scale episodes, environmental crimes have also become an important issue due to the current growing concern by population, the academic community, and global institutions regarding ecological issues, especially climate change and global warming. For instance, the last report from the Intergovernmental Panel on Climate Changes (IPCC) issued in 2021 reinforced the role of human activities in warming the atmosphere, oceans, and land, and that the increase in the temperature on the planet is leading to rapid changes in the biosphere. It states that the global temperature has increased faster since 1970 than in any other 50-year period, and that the scale of recent changes across the whole climate system is unprecedented over many thousands of years. It also reassures that climate change is already affecting many kinds of weather and causing climate extremes such as heatwaves, droughts, tropical cyclones, and heavy precipitation across the globe. The report affirms that “global warming of 1.5°C and 2°C will be exceeded during the 21st century unless deep reductions in CO₂ and other greenhouse gas emissions occur in the coming decades” (IPCC, 2021, p. 18). In order to respond to scientists’ warnings, a worldwide movement by global institutions, governments and companies which involves political actions, public agreements and changes to environmental legislation within the countries and compliance to the legislation by companies is necessary.

Despite the current relevance of approaching environmental crimes, and the diverse range of damage they can cause to ecosystems and animals (including humans), there is very little research on the theme in tourism literature worldwide. In addition, this is from both the

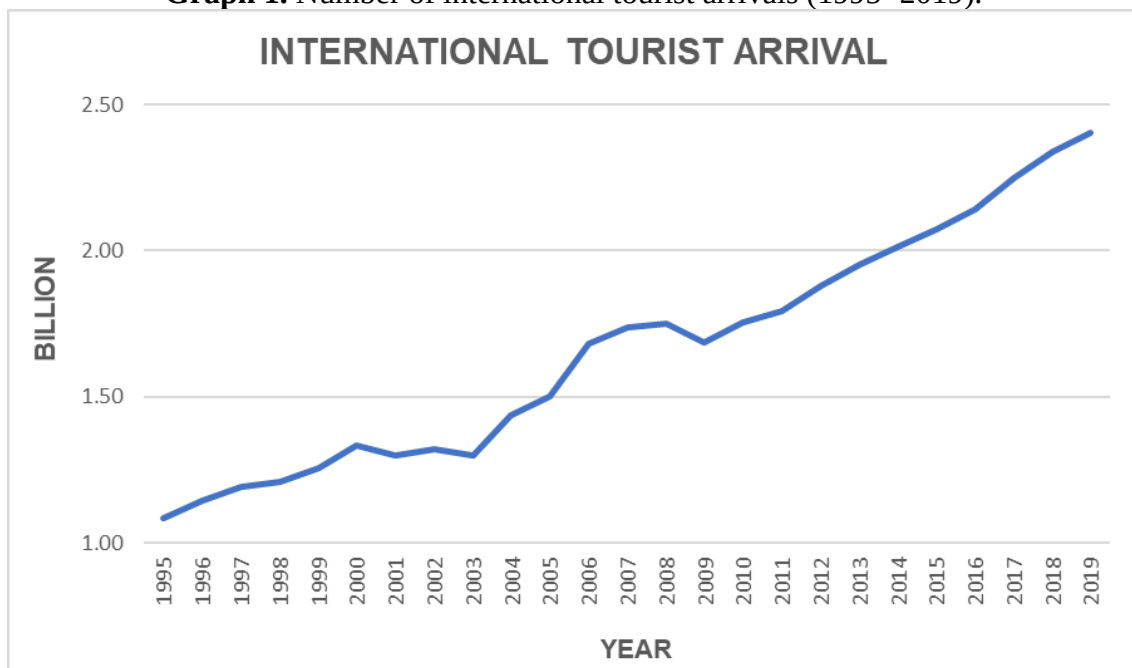
² US dollar exchange rate is equivalent to the 2021 annual average of R\$5.3944 according to IPEADATA (2022).

perspective of the impact of environmental crimes perpetrated by other economic activities or individuals in tourist activities, and from the perspective of tourism as the perpetrator of environmental crimes.

Nevertheless, it is important to say that the study of the relationship between tourism and the natural environment is not new and has been gaining attention from scholars in the last 60 years. There was increased interest on the topic after the 1970s with the emergence of environmental issues, climate change, and debates about sustainable development, especially the development of case studies which confirmed the negative environmental impacts of tourism (Butler, 2000).

From this period onward, the tourism industry became one of the fastest growing industries in the world. The number of international tourist arrivals more than doubled in 20 years. There were around 1.08 billion international tourist arrivals per year in 1995, and then by 2019 there were 2.40 billion tourist arrivals, as can be seen in Graph 1. The Travel & Tourism sector also has important participation in the global economy. For instance, prior to the Covid-19 pandemic, the Travel & Tourism Sector contributed 10.4% (US\$9.2 trillion) of the global Gross Domestic Product (GDP) and 10.6% (334 million) of all jobs in the world (WTTC, 2021). Even after the most severe period of the pandemic which caused travel restrictions and lockdowns worldwide and led to an unprecedented drop in international travel numbers, the Travel & Tourism sector has already been experiencing a gradual recovery (UNWTO, 2022).

Graph 1. Number of international tourist arrivals (1995 -2019).



Source: Elaborated by the author based on World Bank Data (2022).

Nowadays, it is consensus among scholars that tourism impacts the natural environment in several negative ways, but can sometimes also contribute to conservation (Buckley, 2011). How tourism can be moderately developed so that it can minimize the negative impacts on the environment, while also increasing the number of arrivals and income and achieving “sustainable tourist development” is still being discussed in mainstream tourism studies. Therefore, research is focusing on: how to evaluate the environmental impacts of tourism by proposing mechanisms and evaluation models; how to minimize these negative impacts with examples of environmental management, green technology, and environmental policy; and how tourists, residents and the industry behave in relation to the environment, and how these behaviours will affect tourism numbers.

Despite the importance of these studies, most of them are based on the mainstream perspective of tourism studies which focus on tourism as an economic activity and continue to investigate how to make this activity sustainable through societal, economic, and environmental transformations over the years, however without critically reflecting on the relations of oppression inflicted by the economic and political system we are living in. Critical studies on the relationship between tourism and the environment, such as those involving topics of political ecology, environmental justice, and animal ethics remain on the side lines. Thus, it is important to highlight here that critical studies are understood from the perspective presented in 2007 by Ateljevic, Pritchard and Morgan (2007), who wrote that critical tourism scholarship “is more than simply a way of knowing, an ontology, it is a way of being, a commitment to tourism enquiry which is pro-social justice and equality and anti-oppression: it is an academy of hope” (Ateljevic, Morgan, & Pritchard, 2007, p. 3).

Furthermore, one critical perspective which has been neglected in tourism studies is the perspective of Green Criminology. Green Criminology is the subfield of Criminology that approaches crimes against the environment and is defined as “the study of environmental crimes and harm affecting human and non-human life, ecosystems and the biosphere” (Brisman & South, 2018b, p. 1). This field of research not only studies acts and violations legally understood as a crime, but also harmful acts which, although not described as a crime in law, can be as dangerous as those provided in legislation (Sollund, 2015). It is a recent and broad field that has also poorly approached the travel & tourism sector as the perpetrator of environmental crimes, regardless of the importance of the sector to the global economy and contemporary world.

As a result, considering the importance of a healthy and balanced natural environment, the relevance of understanding and combating environmental crimes, and the current paucity of critical studies regarding the negative environmental impacts of tourism, this work attempts to understand the relationship of tourism and the natural environment through the lenses of Green Criminology and elucidate one central question: **“What is the relationship between tourism and environmental crimes?”**. This central question is the starting point for the research conducted herein which in turn led to several other questions: How do the tourism and green criminology fields interconnect in the world literature? What are the patterns of environmental crimes related to tourism? Who are the offenders and the victims of tourism-related environmental crimes? How are tourism-related environmental crimes tackled by environmental law enforcement? How does the process of harmdoing and victimization of environmental crimes related to tourism occur?

In this sense, the main objective of this research is to understand the relationship between tourism and environmental crimes. This main purpose was subdivided into three specific objectives in order to help guide the research work:

- 1) To understand how the Tourism and Green Criminology fields interconnect in the literature;
- 2) To identify the patterns of tourism-related environmental crimes;
- 3) To unravel how the process of environmental crimes related to tourism occur.

Both Critical Tourism and Green Criminology are used in this work as an umbrella theoretical framework which guided the research from its conception to the results presented. However, Green Criminology is not a unified field and has a diversity of branches and approaches which can be applied. This research navigates through a few of them, but in its essence it follows the perspective of Critical Green Criminology. According to Sollund (2015), the role of critical Green Criminology is to neutralize the damage caused by agents of power structures, critically examining the damage by exposing who the actual offenders are, unmasking the possibilities afforded them to execute these crimes within a legal framework, and exploring how injustice is produced. This critical perspective also puts lenses on who are the victims of environmental damage, giving voice to them and proposing political implications for solutions.

In turn, according to Tribe (2007), critical tourism focuses on ends rather than means. It explores power relations and the exercise that these relations have on the researched situation

and research itself. Moreover, it aims for emancipation which will lead to better production and consumption of tourism. In this sense, critical tourism also requires emancipation of ourselves as researchers, to approach the power relations in the production of academic knowledge, to confront the field's dominant approaches with different qualitative data collection methods, to explore the personal, the political and the situated nature of research journeys, and to think critically about the research purpose (Ateljevic, Morgan, & Pritchard, 2007).

Considering all the above, this thesis is structured in six parts in order to tackle the research objectives, including this introduction which attempted to present the gap in tourism research regarding the relationship between tourism and the natural environment, the problem of the research, the theoretical foundation, the guiding objectives and the study structure.

Chapter 2 intends to present the overall methodological path of the research. It approaches the initial thoughts for this thesis and how it was constructed over four years and took shape into this final work. Although the thesis is a static document, research is like a living organism which takes shape according to the data, partial results, conversations with peers and the dynamics of the study object. This chapter is to talk about all of this, the process, some dead ends, and some turns that the research took, the obstacles it had to overcome and decisions the researcher had to make which led to the results presented herein.

The next chapters present the results of this study. Each chapter refers to one specific objective and has its own structure with a small introduction, theoretical review, methodology, results, discussions, and final considerations. This structure was perceived as the best way to present the results of this research. Next, Chapter 3 refers to the first specific objective and attempts to understand how the Green Criminology and Tourism fields interconnect in the world literature. This chapter presents the main theoretical basis of this research. It presents a literature review regarding the tourism and natural environment theme, and also presents the Green Criminology field. It simultaneously analyses the connections between both fields, and reflects on a theoretical framework based on this analysis to approach the nexus tourism-environment through the lenses of Green Criminology.

The following chapter (Chapter 4) aims to meet the second specific objective and analyse the patterns of environmental crimes related to tourism. To do so, it takes Brazil as a study case. This chapter focuses on the socio-legal approach of green criminology and uses official secondary data regarding environmental infractions to identify these patterns. In doing so, it resorts to theoretical discussions regarding Brazilian environmental legislation, and the Brazilian environmental law enforcement structure. The available secondary data on

environmental crimes in Brazil was compiled in a dataset and analysed, which made it possible to discuss environmental crimes related to tourism and how the environmental law enforcement structure and legislation are working to prevent these crimes.

The third specific objective is elucidated in Chapter 5, and attempts to unravel how the process of tourism-related environmental crimes are presented. This part of the research is a study case of one tourism-related environmental offender identified in the secondary data analysis. However, it goes beyond the official data, and assembles diverse data which include documents, interviews, social media tracking, bibliographic research, and observations. It also goes beyond the social-legal approach and not only considers violations of regulations and crimes, but approaches actions and omissions which cause harm to the environment. Furthermore, it is based on the theory of state-corporate crime and green victimology to explain how the process of this specific case occurs.

It is hoped that this study can, in some way, collaborate in building a theoretical and methodological framework regarding environmental crimes and their victims. It also intends to boost the debate on environmental crimes within the tourism field and bring the service economy into the Green Criminology field. It additionally aims to bring empirical elements out of the central axis of the Green Criminology field which still mostly focuses on the Global North (Goyes & South, 2017). Finally, it is hoped to contribute to give voice to environmental victims and to strength their battle in defending the environment, in pursuing punishment and reparation, as well as in fighting for their rights.

2. PATHS OF THE METHODOLOGICAL PROCESS

The initial motivation for choosing this research theme was due to the results found at the end of my Master's degree research, which was conducted between 2014 and 2016 about community tourism networks, with a manuscript entitled: "Tourism and community participation networks: Analysis of the relationship of the Tucum Network's social actors, State of Ceará, Brazil, from 2008 to 2016". The study object was the Tucum Network (Community Tourism Network of Ceará). The obtained results showed that the different communities, members of the network, and their respective Local Tourism Groups, which are the basis of the formal network (that is to say, the basis of the Tucum Network), should have well-defined community ties and very strong community organization so they can develop a community tourism proposal which brings real benefits to the local population and contributes to their struggle to defend their land and territory, affirm their identity and preserve their natural resources (Urano, 2016).

Once the research focused on the analysis of formal networks, there was no possibility to develop further knowledge about social relations within each community. There was also no possibility to analyse and deepen the relation between the various conflicts and threats faced by communities and the process of community organization for tourism development. Amidst the many conflicts and threats faced by these communities, environmental crimes have been chosen as this research theme due to the relevance that the ecosystem has to traditional communities. These communities have elements from the local ecosystem as their essential means of subsistence, given that their livelihoods are based on fishing, agriculture, and extraction activities. Therefore, their survival depends on a balanced and healthy natural environment and their connection with their territory. However, crimes against the environment have been continuously perpetrated in the last 50 years during the coastal development process and the expansion of tourism and other economic activities (such as shrimp farming, wind energy production, petrochemical, steel, thermoelectric and fishing industries) which have been taking place in the state of Ceará, in northeast Brazil.

Once the research theme was defined, the methodological process began with exploratory bibliographic research which aimed to understand the literature on environmental crimes. This step led to the Green Criminology field and a review of the literature related to Green Criminology was conducted. To do so, an adaptation of PROKNOW-C methodology (Ensslin, Ensslin, Lacerda, & Tasca, 2010) of theoretical reference selection was used. This exploratory bibliographic research was particularly important to understand the Green

Criminology knowledge state and perceive the trends and gaps in the field. It guided the construction of the preliminary research problem and objectives, and defined the preliminary methodological process. The main part of the bibliographic research and deepening of the theoretical framework on Green Criminology was done during a visit to Cardiff University in Wales, United Kingdom, as a graduate research visitor from September/2019 until August/2020. This period allowed me to access the bibliographic collection and scientific databases on Criminology of Cardiff University, as well as to exchange knowledge with other researchers and academics in the field. This experience was extremely important to theoretically mature in the Green Criminology field.

This approach to Green Criminology literature revealed that there were very few works on Green Criminology related to tourism. Another important revelation was that the literature in Green Criminology in Brazil is very scarce. The criminology field in Brazil is rather recent, as the first graduation courses only started in the year 2019. Before that, themes across criminology were mainly researched by social and law sciences. Nevertheless, it is important to state that there is a considerable amount of research on environmental conflicts in Brazil, which can also be approached by Green Criminology.

This gap in the theme led to a necessity to primarily focus the investigation on environmental crimes related to tourism, and not only community tourism initiatives. This led to a new direction for the research which consisted of understanding the relationship of environmental crimes with tourism activity. Then, another bibliographic research was conducted regarding the tourism and natural environment theme. This bibliographic research revealed that although environmental impacts of tourism activity have been studied for some decades in the tourism field, environmental crimes are rarely the subject of research. There were no papers in the journals searched associated to the keyword 'environmental crime'. This finding led to a more exploratory nature of this thesis in order to find the links of the relationships between tourism and crimes against the environment, since there was no previous literature about this theme. A more detailed explanation of the methodological procedures as well as the results and discussion of the bibliographic research are presented in Chapter 3.

The next step of the methodological path was to conduct desk research targeting the websites of international and Brazilian organizations which work with environmental crime, searching for official documents and statistics on the subject. Thus, websites of organizations such as United Nations Interregional Crime and Justice Institute (UNICRI), United Nations Environment Programme (UNEP), International Criminal Police Organization (INTERPOL)

were accessed during this stage. This process showed a lack of statistical data regarding environmental crimes worldwide. UNEP (2018) cited the lack of data, knowledge, and awareness as one of the many obstacles faced by countries and agencies to respond to environmental crimes. Regarding the lack of official data, it is noteworthy that this kind of information is essential for governments and institutions to develop policies in any capacity or area. However, obtaining accurate information on the illicit supply chain of environmental resources and illegal activities is very difficult. For that matter, it remains a current deficit in relation to the collection, analysis, and publication of reliable national statistical data on environmental crimes (UNEP, 2018). In addition to the overall lack of statistical data, international reports mainly refer to the category of crime (for instance, fishery crimes, forestry crimes, illegal wildlife trade, waste, and pollution) and build their analyses based on these categories. In this sense, there was not any mention in these documents of tourism industry as an offender, but there were a few mentions of the impact of environmental crimes on tourism activity.

The desk research continued targeting Brazilian institutions such as the Environmental Ministry of Brazil (*Ministério do Meio Ambiente do Brasil - MMA*), Brazilian Institute of the Environment and Renewable Natural Resources (*IBAMA*), and the Chico Mendes Institute for Conservation and Biodiversity (Instituto Chico Mendes - *ICMBIO*). There was also a lack of statistical data regarding the subject which showed the necessity to find where the raw data could be found. Therefore, the next stage was to organize and analyse available secondary data regarding environmental crimes in Brazil. In order to conduct this survey, bibliographic research was carried out focusing on the Brazilian environmental legislation. This process sought to understand how Brazilian environmental legislation evolved, how environmental crimes are addressed, and how the law enforcement structure is organized. This step was important to trace which information about environmental crimes could be accessed and collected, allowing to identify some key institutions such as: *IBAMA*, *ICMBio*, the Federal Prosecutor's Office (*Ministério Público Federal - MPF*), Federal Justice (*Justiça Federal - JF*), and the Federal Police (*Polícia Federal – PF*).

The websites of these institutions were accessed looking for online information on environmental crimes, which could be infraction notices, public civil actions, or court sentences, etc. However, only *IBAMA* had useful information available online that could be used as secondary data. In this sense, the secondary data analysis was conducted mainly using the dataset available online on *IBAMA*'s website. Thus, a secondary data analysis involving the

data from all the states of Brazil was conducted. However, due to the complexity of the environmental law enforcement framework in Brazil, which not only comprises the federal level, but also the state and municipality levels, one state (the state of Ceará) was chosen to enable a more in-depth analysis. Then, other institutions' websites were visited such as the Ceará State Prosecutor's Office (*Ministério Público Estadual - MPCE*), Ceará State Justice (*Tribunal de Justiça do Estado do Ceará - TJCE*), Ceará State Superintendence of the Environment (*Superintendência Estadual do Meio Ambiente do Estado do Ceará - SEMACE*), Ceará State Police (*Polícia Civil do Estado do Ceará - PCCE*), and Ceará State Military Police (*Polícia Militar do Ceará - PMCE*). Only the *SEMACE* website had online data regarding environmental infractions available, which was also used in the secondary data analysis. It is important to say that there was also an attempt to understand the crimes in the local level. In order to do so, the municipality of Caucaia in Ceará was chosen after analysing the secondary data from *IBAMA* and *SEMACE* in Ceará. This analysis enabled defining the locus of the field research conducted in the next stage. In turn, the municipality of Caucaia, which comprises the locus of the field research, was chosen as a sample of the environmental crimes at the local level. However, although Caucaia already had a structured environmental body, it did not have online data available on the infraction notices which could go through analysis.

The next stage of the methodological process sought to access secondary data that were not available online, as well as to better understand the environmental legislation, the law enforcement structure, and the results of the analysis of the secondary data obtained in the previous stage. In this sense, six public bodies were contacted via email from March 2021 to request a semi-structured interview with a representative: *IBAMA*, *SEMACE*, *MPCE*, *PF*, *PCCE*, and *PMCE*. The contact was done by email mainly because of the SARS-CoV-2 (Covid-19) pandemic. I visited the organizations in some cases, but there was no access to the facilities because of the pandemic situation. A more detailed overview of the methodological process of the secondary data analysis and the results and discussions are presented in Chapter 4.

Analysing the secondary data from Ceará also enabled defining the locus of the field research. The field research intended to understand the process of harming and victimization caused by specific tourism-related offenders identified in the secondary data analysis. Thus, bibliographic research on Green Victimology was conducted during this step of the research to better understand the processes involving environmental victimization. The primary thought was to work with two of the main tourism-related environmental offenders identified: Vila Galé Brasil, located in Cumbuco, which is one of the main tourist destinations in Ceará; and Kite

Worldwide Brasil Hotéis e Eventos Ltda, located in Tatajuba, which is one of the initiatives of community tourism which is part of the Tucum Network. The choice of these two offenders, one in a mainstream tourist destination and one located near a community-based initiative, was to compare the harmdoing and victimization processes. However, Tatajuba was not receiving visitors for a long period due to the covid-19 pandemic, which made it impossible to conduct field research. Therefore, the community was excluded from the analysis and the study only focused on Vila Galé Brasil in Cumbuco, which turned out to be an interesting and complex locus of research.

Field research was conducted between July/2021 and May/2022. Some visits were made to Cumbuco during this period, but the visits were reduced due to the pandemic. Field reconnaissance and non-directive interviews (Michelat, 1975) were conducted in the community during these visits. The non-directive interview was chosen because the intention of the interviews was not to do a victimization survey on environmental crimes in Cumbuco, but to capture the perception of tourism-related environmental crimes of the interviewees, and capture how they perceived the environmental crimes committed by the tourism industry and one specific environmental offender. Non-direct interviews allow a degree of freedom for both the researcher and the interviewee, and enables producing information with socio-affective content (Michelat, 1975) which is essential to understand the environmental victimization process.

However, due to some residents and leadership refusing to participate in the research, and due to the initial results of the non-direct interviews, other research strategies to collect data were applied in order to gather information on the specific offender. Social media tracking was an important tool to identify current environmental crimes and harm in the locality and to identify potential research participants. Moreover, direct observations, especially in two public hearings, were also paramount for collecting data and identifying potential research participants. Documentary research regarding technical reports on environmental degradation, judicial process and news articles was also conducted. Bibliographic investigation was also used for data collection and focused on the development process of Ceará state and Cumbuco as a tourist destination. After data collection and the preliminary analysis of the results, it was perceived that only Green Victimology was not able to explain issues that emerged in the research. Thus, another bibliographic research was conducted on State-corporate crime, which was also used as a theoretical framework. A better description of the field research methodological process as well as the results and discussions are presented in Chapter 5.

Considering all the above, an overall picture of the research methodology is presented in Table 1.

Table 1. Methodology framework

OBJECTIVE				
To understand the relationship between tourism and environmental crimes				
SPECIFIC OBJECTIVES	RESEARCH APPROACH	RESEARCH TECHNIQUE	DATA COLLECTION TECHNIQUE	ANALYSIS TECHNIQUE
To understand how the fields of Tourism and Green Criminology interconnects in the literature	Qualitative	Bibliographic research	PROKNOW-C	Critical reading
		Documentary research	Online search	
To identify the patterns of tourism-related environmental crimes	Mixed (Quanti/Quali)	Secondary data research	IBAMA/SEMACE data	Descriptive analysis
			IBAMA/SEMACE data	Spatial Analysis
			Semi-structured interview	Content Analysis (Bardin, 2004)
To unravel how the process of environmental crimes related to tourism occur	Qualitative	Case study	Semi-structured interview	Content Analysis (Bardin, 2004)
			Bibliographic research	
			Documentary Research	
			Social Media Tracking	Qualitative analysis of non-directive interview (Michelat, 1975)
			Non-directive interview	
			Direct Observation	

Source: Elaborated by the author (2022)

The methodology showed in this table represents the final methodological process of this research. However, as it was observed, the methodological path of the research was not static, but fluid. It was constructed over the years of the research and a lot of what was thought during the project was modified due to the partial results that were being found in each stage and due to the adversities along the way. In the words of Goldenberg (2004): “no research is fully controllable, with a predictable beginning, middle and end. Research is a process in which it is impossible to predict all the steps. The researcher is always in a state of tension because they know that their knowledge is partial and limited” (Goldenberg, 2004, p. 13, own translation). The understanding that research is like a living organism and speaks to the researcher, which can sometimes lead to unexpected places, was important for achieving the results of this thesis.

Nevertheless, although this study navigates through different approaches and techniques, it has its basis on the dialectical scientific method. The scientific method is perceived here as an abstraction (Marconi & Lakatos, 2003) and works as a compass that will direct the researcher's gaze through the research process, guiding the logical thinking behind the researcher's perception of reality.

Konder (2008) illustrated the meandering ways dialectics has been through until the present. According to the author, dialectics has its origins in Ancient Greek as an aspect of rhetoric, the art of dialogue, and turned into a way to present a thesis through argumentation. The dialectical conception was repressed at different times in history, but it never disappeared. It was reintroduced with new meaning at various moments by different philosophers, such as Aristotle (384-322 a.C.), Leibniz (1646-1716), Spinoza (1632-1677), Hobbes (1588-1679), Pierre Bayle (1647-1706), Denis Diderot (1713-1784), and Immanuel Kant (1724-1804). Regarding Kant, Konder (2008) highlights that despite being one of the greatest metaphysical philosophers, he did not fail to perceive the contradictions of what he calls "pure reason". Later, contrary to what Kant affirmed, Hegel (1770-1831) showed that contradiction was a basic principle that could not be suppressed either from the subject's consciousness or from objective reality. However, Hegel was an idealist and thought material reality subordinated to the logic of a principle he called the "Absolute Idea". Therefore, he often describes material reality rather vaguely. It was in this gap of Hegel's dialectics that Karl Marx used dialectics from a materialist perspective. However, Marx never wrote anything similar to a treaty on the method, and several authors from the Marxist inclination worked to discuss his method, such as Lúkacs (1885 – 1971) and Engels (1820 – 1895). Hence, Marx's dialectical method became a point of dispute (Musse, 2005). In this sense, it is not up to this work to enter this debate, but to present the basis of dialectics that this study has its foundation. This will be done based on Konder (2008).

Konder (2008) affirms dialectics is perceived in the modern era as "the way of understanding reality as essentially contradictory and in permanent transformation" (Konder, 2008, p. 8). Dialectics gives the researcher the conscience of the inevitable change and the impossibility to not see the contradictions. In addition, dialectics has a critical and self-critical nature. Finally, the dialectical method intends to understand the present through a critical review of the past and "questions the present in the name of the future" (Konder, 2008, p. 82).

Considering all the above, discussions based on each specific objective of this thesis will be presented in the next chapters.

3. TOURISM AND GREEN CRIMINOLOGY: THEORETICAL REFLECTIONS

3.1 INTRODUCTION

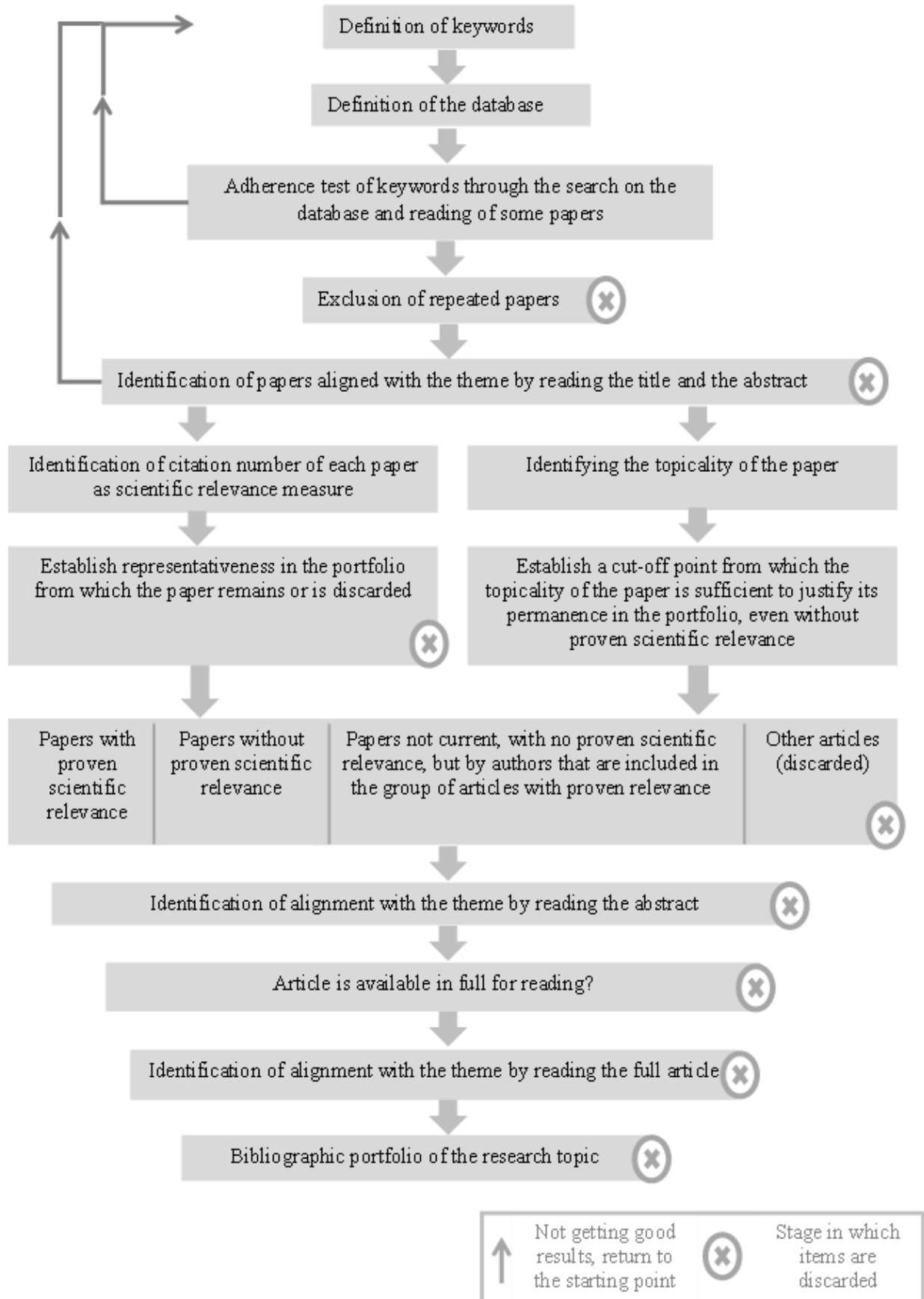
The purpose of this chapter is to answer the question: “How do the tourism and green criminology fields interconnect in the world literature?”. It is not aimed to be a systematic review or a bibliometric analysis, but it aims to be a review of the state of knowledge on the nexus tourism-environment and to investigate how Green Criminology is approached in the Tourism field.

This essay presents some reflections of points that were perceived through the reading and examination of the literature on the nexus tourism-environment and its connections with Green Criminology. In order to do so, the methodology used in the bibliographic research is first presented. Then, the state of knowledge of the research on the tourism-environment nexus within the Tourism field is presented. Second, the field of Green Criminology and its research agenda is presented, identifying studies that analysed tourism practices. The review of both fields made it possible to identify and discuss the interconnections between them and to reflect upon some important points regarding the relationship between tourism and environment. The result was the proposal of a research framework to study tourism’s negative environmental impacts through the lenses of Green Criminology.

3.2 METHODOLOGY

Although this literature review is not aimed to be a systematic review or a bibliometric analysis, it followed a systematic methodology in order to select the material that could be used in this analysis. Thus, an adaptation of PROKNOW-C methodology (Ensslin, Ensslin, Lacerda, & Tasca, 2010) of theoretical reference selection was used. The PROKNOW-C methodology comprises a sequence of procedures which aims to build a bibliographic portfolio with relevant material on a particular subject, as can be seen in Figure 01.

The first step of PROKNOW-C methodology is to define the keywords to be used in the search. The first keyword selected in the first stage was “green criminology”, as well as the combination of “green criminology + tourism”. The keywords were searched in Portuguese, Spanish, and English languages.

Figure 1. PROKNOW-C methodologySource: Ensslin *et al* (2010)

The second step of PROKNOW-C is to select databases. Thus, the Scopus, Scielo (Web of Science) and Redalyc databases were selected in this step. The third step was the adherence test through searching in the databases. The keywords were maintained after the tests. The results found in each search were exported to Microsoft Excel software and organized in spreadsheets containing information on Authorship, Title of the Document, Year of Publication, Journal, DOI number, Document Type, and Database.

After each spreadsheet was constructed, they were cross-linked, which means that all the results found in the different databases were gathered and repeated articles were excluded, which is the fourth step of the methodology. The step regarding identification of citation number and topicality of the document was not applied and all documents were considered. No time filter was applied as the aim was to have complete understanding of evolution of the field. Furthermore, I conducted an analysis through the reading of the title and abstract (when necessary) to verify the material alignment with the research theme. At this stage, articles not aligned to the research theme were excluded. This process resulted in a total of 237 documents on all subject types on Green Criminology. These archives included book chapters, articles, editorials, reviews, and notes published in scientific journals. There were some papers and books that I did not have access to. It is noteworthy that other articles and books were inserted in this database and in the construction of the theoretical framework from reading the initially selected papers.

After constructing a dataset of potential material regarding the Criminology field, I conducted another bibliographic research using the keywords “tourism + natural environment” and “tourism + physical environment”. This search was conducted using the same adaptation of the PROKNOW-C methodology and resulted in a database of 556 documents. After selecting the papers, the titles and abstract of these documents (when available in the database) were analysed once more and the documents categorized by thematic. This analysis and the full reading of some of the documents which mainly focused on literature reviews on the theme showed that some critical approaches regarding tourism and environment were still understudied in the tourism field. In this sense, a more specific search was conducted using keywords regarding critical approaches on the tourism-environment nexus. The choice of the keywords was based on the previous analysis of the papers and on the research theme. The keywords used were “environmental crime”, “green crime”, “environmental justice”, “political ecology” and “animal ethics”. I conducted this search directly on the websites of the main international scientific journals in the tourism field according to the CiteScore available in the

Scopus Database, as well as the main Brazilian scientific journals on tourism according to Qualis CAPES. The journals searched and the number of studies on the critical themes found in each journal are shown in Table 1. As a result, a total of 57 papers were identified in the search: 35 papers on the theme of ‘political ecology’, 14 papers on ‘animal ethics’, and 8 papers on ‘environmental justice’. No papers were found with the keywords ‘environmental crimes’ nor ‘green crimes’. The journal with the highest number of critical studies was the Journal of Sustainable Tourism, followed by Annals of Tourism Research and Journal of Ecotourism. Only 8 of the 24 journals searched had critical studies on these themes.

Table 2. Number of critical studies on the Nexus Tourism-Environment by journal.

JOURNAL	N
Journal of Sustainable Tourism	26
Annals of Tourism Research	11
Jornal of Ecotourism	7
Tourism Geographies	5
Tourism Management Perspectives	3
Revista Brasileira de Ecoturismo	3
Current Issues in Tourism	1
Journal of Travel Research	1
Tourism Management	0
Jornal of Service Management	0
Journal of Travel and Tourism Marketing	0
Journal of Hospitality Marketing & Management	0
Scandinavian Journal of Hospitality	0
Cities	0
International Journal of Hospitality Management	0
Jornal of Destination & Marketing	0
Jornal of Hospitality & Tourism Research	0
International Journal of Tourism Research	0
Applied Geography	0
International Journal of Contemporary Hospitality Management	0
Revista Brasileira de Pesquisa em Turismo	0
Turismo Visão & Ação	0
Caderno Virtual de Turismo	0
Turismo em Análise	0
TOTAL	57

Source: Elaborated by the author (2022)

After selecting the materials, I mainly focused on reading the theoretical and critical articles. The literature review is presented in the next section, followed by the discussion and final conclusion sections.

3.3 TOURISM AND THE NATURAL ENVIRONMENT: A REVIEW

The debates and discussions about humans exploiting nature and animals without limits and the repercussions for the planet and our own survival has been spreading to all knowledge fields. Research under the topic of tourism and natural environment has been gaining more attention by scholars in the last 60 years (Holden, 2000). Although there was not much research in the tourism field about the topic until the 1970s, there were already some studies scattered in different fields. However, the main image reflected then was that tourism was an environmentally friendly activity, the “smokeless industry” (Holden, 2000).

Then after the 1970s there was increased interest in the topic, both because of an explosion of tourism activity concerned with natural landscape and wildlife (Budowski, 1976), and the growing awareness of the negative environmental impacts of tourism which was led by the increase in tourism. In 1976, Budowski (1976), the Director-General *ad interim* of the International Union for Conservation of Nature and Natural Resources (IUCN), analysed the relationship between those who promote tourism and those who advocate for natural conservation. For the author, there are three manners by which this relationship can occur: conflict, coexistence, and symbiosis situations. All three of situations existed in some extent worldwide at the time, but most cases were of coexistence advancing to conflict. Therefore, it was necessary that this relationship moved towards a symbiotic relationship in which both the tourism industry and the conservationists could benefit from this association. In this relationship, tourists visiting nature would benefit in a physical, aesthetic, cultural, scientific, and educational sense, and would provide an economic source for management tools and actions for nature conservation. Thus, tourism would be a useful tool in achieving a better life. Budowski (1976) pointed out some ways in which tourism can successfully invest in conservation such as the tourism industry’s financial support of conservation organizations and assistance in establishing and maintaining information centres; tourist authorities’ assistance to publications regarding natural resources for the public and contribution to conservation groups’ efforts regarding tourist guidelines for natural areas, etc. Budowski (1976) seemed to rely on the will of the tourism industry and authorities in caring for the environment and natural

resources. Therefore, the transition from the situation of ‘coexistence leading to a conflict’ to a symbiotic situation is only a matter of good planning and management.

This was also Cohen’s perspective in a paper published in 1978. In this paper he argued that there were two main views regarding the study of tourism and the natural environment during that time. The first one, the older and traditional one, argued that tourism is an economic activity that does not destroy the natural environment, and can promote a real preservation of natural and historical sites. Under this view, raw spaces, not yet ‘touched’ by modernization, urbanization, and industrialization processes, became economic assets. Following this perspective, many developing countries, including Brazil, had turned to tourism as an economic strategy to overcome what they called the lack of industrialization and modernization. In sequence, the second viewpoint argued that tourism has negative effects on the natural environment (just like in the cultural and social spheres). Once tourists are used to specific facilities that these natural spaces do not have, there is a necessity to develop physical structures to comply with tourist needs. This process will invariably result in transformations of the natural environment, which will eventually modify the ecological dynamics.

Cohen (1978) highlighted that neither of these two views was fully accepted at the time. He concluded that tourism as an industry on a massive scale will lead to severe risks to the natural environment, and only a moderate and well-distributed tourism development will help preserve natural and historical environments. The authors state that “there are environmental limitations for the development of tourism in the same sense in which such limits exist for expanding different industries and transportation systems” (Cohen, 1978, p. 234). But Cohen also seems optimistic that planners would gradually reorient their major concern from ‘planning the environment for tourism’ to ‘defending the environment from tourism’, even if this means to reduce the number of tourist or certain types of tourist uses in a specific area.

Pigram (1980) criticizes Cohen’s paper for his dichotomous view of tourism environmental dynamics: ‘protecting the environment for tourism’ or ‘protecting the environment from tourism’. For the author, these two objectives are not mutually exclusive. He also criticizes the debates on the environmental implications of tourism at the time, stating that it was often polarized towards a negative perspective. He argues that there are several forms of tourism impact, and the net effect may be environmental enhancement, or the interaction may be neutral. For Pigram, tourism and environment are interdependent, perceiving the environment not as a constraint for tourism, but as a resource and an opportunity. He advocates that the negative effects of tourism on the environment need to be balanced against positive

impacts. According to the author, it is not an easy task to reconcile the conservation of natural and human heritage with the growth of tourism. Nevertheless, it is a possible task through the assessment of likely environmental impacts of major tourism projects together with an education and communication process regarding environmental matters which encompass the different agents of the industry (planners, managers, tourist, etc.). Pigram also presents the case of a foreign project of a resort development in Queensland, Australia. This project generated several social and environmental discussions in the community, but he saw the development of this project as a positive example of a harmonious relationship between tourism and environment, and which marked a contrast to the standards of other coastal resorts in Australia³. He concludes that tourism has the capacity to generate conflicts within its environmental settings and it is essential that tourist projects include conservation of the physical and human resource base.

In the 1990s, May (1991) discussed the relationship between tourism, environment, and development, defending that tourism depends upon the quality of its natural product, but at the same time it impacts the environment through the use of water resources, land consumption of agricultural and craft products, and produces waste, litter and sewage. For the author, the impact of tourism is concentrated in the destination areas, transport routes and around service areas; moreover, it comprises two types: those associated with the facilities and those resulting from the tourists themselves. He argues that tourism needs to adjust its objective towards long term outcomes, and consider development to be more environmentally sensitive. In addition, tourism needs to consider the developers, host communities and tourists' values regarding the environment. For him, both natural and built environments are used by human animals within a framework of values (which comprise ideas, experiences, and expectations) and these values influence the way humans exploit and manage the environment. Therefore, the value of a community is a critical component in any environmental management scheme. The local sense of stewardship must be recognized. This perception is important because it considers the local community as part of the environment.

John Urry (1992) stated that there are four main ways in which societies have intersected with their respective physical environment: (1) stewardship, in which there is responsible care of the environment to provide a better inheritance for future generations; (2) exploitation, which

³ One of these conflicts included a bomb explosion on the construction site of the resort in 1980. The resort opened in 1986. Most of the resort's facilities were closed in 2016 and remains derelict nowadays (Semmler & Culliver, 2020).

sees nature separate from society and available for its maximum instrumental appropriation; (3) scientization, in which nature becomes object of scientific investigation that leads to some degrees of intervention and regulation; and (4) visual consumption, in which the environment is built as a landscape for aesthetic appropriation. Although there may be historical ordering, they can all be found in contemporary societies. His focus was on the way society interacts with the environment through visual consumption and discussed the changes tourism has been inducing in the environment from the perspective of tourists' gaze. For the author, tourism is inseparable from the environment (both physical and built), since tourism is fundamentally concerned with visual consumption of landscapes (and in many cases of residents too); and visual consumption also causes several consequences. Particularly regarding physical environments, Urry states that the growth of the romantic touristic gaze, which celebrates nature, helped tourism to spread worldwide. This increased the contradictions embedded in the relationship between tourism and the environment. As people appreciate and search for untouched physical environments to gaze upon and register through photographs, it increases the demand to protect and conserve these landscapes; at the same time these environments are affected due to the huge numbers of visitors and tourist development. For the author, the constant increase in tourist practices makes it difficult to regulate access and to maintain those environments in ways in which neither entail socially divisive forms of restricted access nor cause other environmental damage. It is worth noting that he emphasized in this paper that neither private corporations nor states had been able to develop collective solutions to mitigate the consequences of the increasing tourist flows until that point in time.

Despite the increased interest in approaches involving the topic of tourism and environment, for Butler (2000), the research between tourism and the environment was (by the year 2000) being taken for granted and rarely researched to any depth. Despite the increase in publications regarding the environmental impacts of tourism and recreation, most of them were case studies which served to confirm the environmental impacts of tourism. Thus, there was a need to understand the causes and processes which led to these negative results from tourism. Nevertheless, Butler (2000) acknowledged that it is not an easy task to understand the environmental impacts of tourism due to several factors. First, changes in the environment may take a considerable time to manifest. Therefore, long observations and research is needed to identify them. This is true for most research involving environmental impacts, and it is the main difficulty in addressing this theme. Longitudinal studies require more funding and resources than transversal ones, which can make the application of these kinds of studies difficult. Second,

tourism does not take place in a controlled environment, and it is rather difficult to separate the effects of tourism from other natural, social, and economic activities, since tourism is rarely never the only use of the natural environment in a specific area. Therefore, associating cause and effect of the environmental impacts of tourism is very complex (Butler, 2000).

Butler (2000) also argued that the dependency of tourism upon a healthy and pristine environment was inaccurate and false. For this author, several types of tourism are separated from the natural environment, and although general environmental factors may influence tourist attraction, aspects such as price, infrastructure, marketing, and the presence of other tourists are more important. Notwithstanding, he stated that to pretend that any form of tourism does not impact the environment is naïve and false. But at the same time, it is unrealistic to claim strict control or reduce all forms of tourism, as this would be economically (or even environmentally to other areas) damaging. For Butler, if the concern is sustainable development, a global concept, the relationship between tourism and environment should also have a global perspective which needs to include both positive and negative effects of tourism in a balanced view.

Buckley (2011) also addressed the relationship between tourism and the environment. He stated that the environmental aspects of tourism were still understudied (by the year 2011) with around 1,500 publications, and research was scattered across many fields, with the most significant contributions not being published in tourism journals, but in journals in the field of conservation and economics. For Buckley, tourism impacts on the environment are less addressed than other industry sectors. According to the author, this is due to several reasons. From the industry perspective, tourism is diffuse and cross linked with other industries such as aviation, automobile and construction; there are no specific materials, tools or technology to the tourism industry; government tourism ministers are seen as second profile figures; tourism industry associations do not have significant lobbying power; government tourism budgets are mainly spent on marketing; and although tourism presents itself as an environmentally friendly sector, very little is contributed to tourism research. From a research perspective, most research on the mechanisms, measurement, and management of tourism's environmental impacts is still rather crude and there is a lack of knowledge of tools, techniques and theories from other disciplines which could be applied in tourism research. According to Buckley, tourism has been increasing in importance as both a conservation tool and as a threat to the environment, and it deserves more attention from researchers.

In 2012, Buckley (2012) published a literature review in which he analysed the research on the topic of sustainable tourism under an evaluation framework of 5 main topics: population, peace, prosperity, pollution, and protection. According to Buckley, research regarding the link between tourism and population, and tourism and peace is limited. The links between tourism, prosperity and sustainability are complex, but on a large scale, prosperity increases environmental impacts. The main concern here is regarding his insights on pollution and protection. Research has shown that tourism contributes to atmosphere, ocean and freshwater pollution, and it also produces direct local impact on air, water, soil, and biota due to atmospheric emissions, solid and liquid waste, and water, energy, and material consumption. There are additional impacts to parks and natural areas from vegetation damage and wildlife disturbances. The link between climate change and tourism has gained increasing attention, and research has shown that industry's claims over carbon emissions are unrealistic; and some tourist destinations are already being affected by climate change. Furthermore, tourism in public protected areas is heavily studied and research has shown that tourism can support conservation through private reserves, communal conservancies, and contribution to public protected areas under certain circumstances and with associated environmental costs. For Buckley, government environmental regulation is essential to sustainability in tourism; however, it is undermined by poor implementation. The tourism industry has often lobbied against it, proposing self-regulation as an alternative. He concludes that "mainstream tourism is far from being sustainable" (Buckley, 2012, p. 534).

It is important to highlight that the debate regarding tourism and the natural environment from the 1990s onward was much influenced by the discussion of sustainable development. Sustainable tourism development gained increased attention by tourism academics and practitioners, achieving widespread acceptance (Sharpley, 2000). However, the concept of sustainable tourism development is still in debate and falls within 2 categories: sustainable tourism, which focused on sustaining tourism as an economic activity, and sustainable tourism development, which considered tourism as part of a wider sustainable development. For Sharpley (2000), there was a fundamental failure to build a theoretical link between the paradigm of sustainable development and the concept of sustainable tourism development. In an attempt to address this debate, Sharpley (2000) wrote a paper on the theoretical divide between tourism and sustainable development in which he compares sustainable tourism development to a proposed model of sustainable development. He concluded that "'true' sustainable tourism development is unachievable" and "the concept is, in effect, a red herring"

(p. 14). For the author, tourism development rationale was still based on economic growth, and the structure of international tourism reflects an imperialistic dependent nature which is not compatible with an alternative development.

Recently, Sharpley (2020) revisited his article (2000), arguing that the theoretical divide identified 20 years ago has now become a divide between policy/theory and practice. According to the author, sustainable tourism research and policy occupy a parallel universe to the practice of tourism, and the last 20 years has shown little progress towards achieving sustainable tourism development. The goal of development has changed, moving from a concept of economic growth to concepts of well-being and prosperity, whereby individuals within societies are able to enjoy fulfilled and hopeful lives. In addition, the concept of sustainable de-growth has been considered as a more appropriate path to well-being on a global scale. However, the concept of sustainable tourism development has evolved separated from these transformations on the concept of development, and tourism still relies on economic growth. Despite the emergence of several initiatives of tourism that reflects the principles of sustainable tourism in local and regional levels, sustainable tourism development can only be achieved on a global level. But the global growth agenda for tourism and the trends in international tourism numbers contradict this sustainability. Therefore, Sharpley (2020) argues that a causal link between tourism and development can no longer be justified, and he advocates for a rebalance of tourism on a global basis through a re-think on how tourism is produced, managed, and consumed.

As stated before, the debate regarding the relationship between tourism and the natural environment is not that new, and after 6 decades, it can be said that it is now fully accepted that, as Buckley states simply and clearly, “tourism uses nature as part of its products; it creates environmental impacts; and it can sometimes contribute to conservation” (Buckley, 2011, p. 398). However, the debate on how tourism can be produced, managed, and consumed in order to mitigate the negative environmental impacts continues, and it seems like it did not evolve as it should have. New forms of tourism that were advocated in the 1980s, 1990s and the 2000s as a possible solution for the problem did not accomplish what was marketed. The so-called sustainable tourism development became an institutional void discourse that is more preoccupied in sustaining tourism than to maintain the quality of the natural environment, the ecological dynamics, and life on the planet.

The most relevant research on topics involving the relationship between tourism and environment are not in the tourism field. How tourism can be moderately developed to minimize the negative impacts on the environment while also increasing the number of arrivals

and income is still being discussed in tourism studies. Therefore, research is focusing on how to evaluate the environmental impacts of tourism, proposing evaluation mechanisms and models; on how to minimize these negative impacts with examples of environmental management, green technology, and environmental policy; and how tourists, residents and the industry behave in relation to the environment.

Despite the importance of these studies, most of them are based on the mainstream perspective of tourism studies which investigate tourism as an economic activity and they continue to explore how to make this activity sustainable through the societal, economic, and environmental transformations throughout the years without critically reflecting on the relations of oppression inflected by the economic and political system we are living in. Mainstream tourism research sees the environment as a resource (or a product) that can be exploited in a ‘sustainable way’ by implementing good management and an adequate planning. However, a balance between economic benefits and negative social and environmental impacts still prevails, with the scale always tipping towards the short-term economic benefits. More critical approaches on the relationship between tourism and the environment remain on the side lines (Mosedale, 2015; Rainer, 2018; Winter, 2020), even though it has been gaining more attention.

For instance, Stonich (1998) advocated for political ecology of tourism in 1998, but the topic has been neglected over the past years (Rainer, 2018). Despite a book by Gössling (2003), the topic has only recently gained more attention with an increase in studies using the lens of political ecology in its analysis, some books regarding the theme (see for instance, Nepal & Saarinen (2016) and Mostafanezhad, Norum, Shelton & Thompson-Carr (2016)), and two Special Issues regarding the theme; one in the *Journal Tourism Geographies* (Critical Engagements with Nature – Tourism, Political Economy of Nature and Political Ecology - 2015) and another in the *Journal of Sustainable Tourism* (Political Ecology of Tourism – 2019).

Political ecology is a conceptual framework which aims to understand how human-environment relationship is produced, reproduced, and altered (Douglas, 2014). Through the lenses of Political Ecology, Stonich (1998) showed that significant environmental degradation on Bay Island in Honduras is perpetrated by the actions of power national and international stakeholders; and the impoverished Latino immigrants and poor-Afro-Antillean residents were the most vulnerable to environmental health risks. Cole (2012) analysed the water inequity in Bali, demonstrating that both international and local businesses can afford to bore ever greater depths to access underground water and pay for private supplies, while the marginal communities cannot afford piped/bottled supplies and their wells have run dry. Mathis and Rose

(2016) analysed the intersection among tourism, conservation efforts and development in San Cristóbal Island, Galápagos Islands, revealing that while some appreciate some aspects and benefits from tourism, others lament the commodification of nature and their way of life. Lavanchy (2017) evidenced a local water crisis in the local context of Gigante, Nicaragua, as consumption has outpaced supply and one of the causes (together with diminished rainfall) is tourism driving groundwater abstraction, which is likely to increase given the recent advertising of the area for tourism purposes. Moreover, Cole (2017) uses a feminist political ecology approach to analyse the gender-water-tourism nexus in Labuan Bajo in Indonesia. The results showed that tourism competes with locals for water access which leads to women suffering in multiple ways, and that the weak implementation of water policy hinders access and control of the benefits of water by the poor local population, which might lead to greater costs and health problems.

In addition to political ecology, an environmental justice approach has also received very little attention by tourism studies. Environmental justice denotes a conceptual framework that considers the unfair distribution of the negative environmental consequences of the development process through race, gender, and class groups (Lee & Jamal, 2008). For example, Porter and Tarrant (2001) used an environmental justice framework and geographic information system to examine whether inequalities exist for certain socioeconomic and racial groups regarding the distribution of federal tourism sites in Southern Appalachia. The results showed that the location of federal tourism and recreational areas may be advantageous to white people and disadvantageous to minorities. However, the authors highlight that the benefits or costs of living near these areas should be considered. If one considers the benefits such as solitude, recreational opportunity, and employment, it will lead to inequalities. However, if one considers the costs like urban sprawl, noise, and congestion, the inequalities may be diminished. Lee and Jamal (2008) argued that studies on the environmental impacts of tourism have not focused on the equity of its distribution among social groups and offer a preliminary environmental justice-sustainable tourism framework for future analysis. Furthermore, Morea (2021) presented a study case in Bahía de San Antonio Protected Natural Area, in Patagonia, Argentina, in which he examined social feedback on tourism in protected areas using spatial analysis methods combined with well-being and an environmental justice framework. The study showed a two-fold relationship between tourism and conservation, as tourism hinders achieving conservation goals, but there is recognition of social feedback in tourism.

Another topic addressed in tourism studies, but until very recently hasn't received much attention is 'animal ethics'. Tourism utilizes a very diverse range of animals as its products, allowing human-animals to have access, view and interact with a different number of species. As a result, many of these animals are abused, cruelly treated, and killed (Winter, 2020). In a review of the state of the research under the theme of animal ethics in tourism, Winter (2020) analysed a sample of 74 papers which were published between the years 2000 and 2019. The author states that although there is a clear increase of papers on the theme over time, there is still a great deal of work that can be done by tourism researchers to improve animals' lives.

Finally, one approach which has been poorly presented in tourism studies is Green Criminology. This review did not find articles regarding the theme 'environmental/green crimes' or the approach of Green Criminology using a keyword search in the main tourism journals. There is a paucity of research on how tourism practices are related to environmental crimes in the world tourism literature, both from the perspective of the impact of environmental crimes perpetrated by other economic activities or individuals in the tourist activity, and mainly from the perspective of tourism as the perpetrator of environmental crimes. The next section aims to present the perspective of Green Criminology.

3.4 THE PERSPECTIVE OF GREEN CRIMINOLOGY

Criminology emerged in the late 19th century with new forms of government, the development of the modern penal state, and the expansion of prisons in industrial societies (Botterill & Jones, 2010). In traditional criminology, studies have focused on seeking explanations for the causes of criminal behaviour from individuals' genetic or psychological predisposition (Botterill & Jones, 2010; Dornelles, 2017). Crime was therefore seen as a manifestation of the degenerate nature of some, which was in turn seen as pathology of the individual whose behaviour should be controlled, monitored, and repressed (Dornelles, 2017). Thus, genetic and psychological determinism excluded a historical-structural approach to the internal contradictions of social formation.

In between the emergence of 'individual positivism' (i.e. biological, or psychological approaches to explain crime), there was a significant body of work which is broadly described as 'sociological positivism'. In this body of work, explanations for crime were not found in individual pathologies, but in social pathologies which shaped individual behaviour such as poverty, family breakdown, unemployment, poor education, and bad housing. All of these

social ills became increasingly seen as key explanations for criminal offending, and this body of work became the prominent influence behind ‘penal-welfare’ approaches to tackling crime.

A new criminology emerged in the 1960s which was critical of traditional criminology; it sought to identify the determining social and legal order in selecting behaviours to be controlled in the criminalization process (Dornelles, 2017). Under this perspective, crime is not a concrete and universal phenomenon, but a social and political construction, and its meaning varies between different times and different places (Botterill & Jones, 2010). Therefore, crime is relative and depends on society’s reaction to a particular behaviour and it is produced by social relations.

Then during the 1960s and 1970s, a period marked by socio-political events driven by counterculture, civil rights, and environmental movements, even more critical trends in criminology emerged and developed. The political environment of this era and the development of critical criminology allowed the analysis of criminal practices which had not been previously provided by law, such as racism, sexism, imperialism, and environmental crimes (South, 1998; Dornelles, 2017).

In this same period, environmental issues were being raised showing that the Earth and its resources have been wasted and overexploited in a growing process of production and distribution of capitalist society. Thus, the theoretical subfield of Green Criminology emerged within this context, permeated by the development of critical theory and openness to the analysis of different criminal practices, as well as environmental concerns and agendas (South, 1998; Nobles, 2019).

Despite the existence of previous studies involving environmental crimes (Goyes & South, 2017), it was only in the 1990s that the term ‘Green Criminology’ was coined (most associated with Lynch 1990). Several important works dealt with the subject from this period onward and have made efforts to reflect on the role of research within the field. For instance, Lynch and Stretesky (2003) worked to understand the meaning of the term “green” in Criminology by claiming that there are two distinct perspectives: corporate and environmental justice. For the authors, Green Criminology must go beyond the corporate perspective, which focuses on acts or violations defined as environmental crimes by law; and redirect attention to environmental damage, whether or not provided by law. To this end, they argue that Green Criminology must comprise an alternative perspective based on environmental justice. This perspective recognizes the power relations that exist in the social construction of green crimes,

and it understands that the solution to environmental degradation may require substantial economic and political reorganization.

From this viewpoint, economic interest plays an important role in determining whether environmental damage will be treated as a crime or not. Therefore, the environmental damage that is least likely to become the focus of the law is the one with direct impact on oppressed and economically disadvantaged groups. Thus, Green Criminology should structurally construct an economic and political framework that addresses race, ethnicity, class and gender and their relationship to environmental damage (definitions, nature, and distribution). Moreover, it needs to subjectively be sensitive to how group formation affects the emergence and goals of social movements that seek to transform social structures to reduce environmental damage.

In a study from 2006, Zilney, McGurrian and Zahran analysed the literature on environmental justice in the period between 1970 and 2003. The authors showed that there has been a significant increase in work production on the subject since 1999. However, the Criminology and Criminal justice fields are poorly represented in these studies. They also showed that there was a shift in the focus of the analyses over time. Research in the early 1990s focused attention on complaints and efforts by local communities to resist misuse of territories. Attention in the mid-1990s shifted to analyse the connection between exposure to environmental damage and the demographic composition of communities. Then researchers in the late 1990s and early 2000s began to consider the legal and political implications of exposure to environmental damage (Zilney, McGurrian, & Zahran, 2006).

Zilney et al (2006) also showed the existence of eight themes related to the literature on environmental justice: (1) spatial distribution, (2) environmental discrimination, (3) theory and methodology, (4) social movements and concern, (5) public health and risk, (6) environmental legislation and policy, (7) globalization and sustainability, and (8) the philosophy of justice. These eight themes were discussed in order to elucidate perspectives for research on environmental justice in the field of Criminology, such as using the theoretical framework of corporate-state crime in analyses involving environmental justice problems.

More recently, Lynch, Stretesky and Long (2015) reinforced the need for studies from the perspective of environmental justice by Criminology, stating that there are still few studies in the literature that consider issues related to this theme. For the authors, taking into account knowledge of theories of justice, Criminology has much to contribute to the study of environmental justice, and environmental justice studies from other areas should become of interest to criminologists. In this sense, they present some themes which have been neglected

by Green Criminology, suggesting them as the focus of future studies involving environmental justice issues.

Lynch, Stretesky and Long (2015) first claim that Green Criminology is resuming analyses that focus on the relationship between capitalism, environmental destruction, and issues of environmental injustice. However, they point out that there is a lack of economic policy studies on international environmental justice, addressing the connection between the various forms of environmental injustice experienced by populations of different nations and their shared position within the global capitalist system.

Second, they highlight the perception of social movements as part of solving social and environmental injustices. These movements can and have played an important role in promoting justice and actions that have a greater impact on social change than those perpetrated by state institutions. Addressing this theme is therefore important in identifying the needs of communities and how formal institutions can be reconfigured to meet them.

Another suggested theme is the “social justice dilemma”, referring to the forms of social assistance offered to communities affected by environmental degradation and injustice. They underscore the need for social work, mental health professionals, and other interventions to help affected communities.

Finally, they recommend attention to the “corporate dilemma” between meeting legal requirements regarding environmental issues using numerous lobbying mechanisms and efforts, and the idea of corporate social responsibility and efforts to mitigate environmental degradation for the social good.

Sollund (2015) points out that Green Criminology is not a unified field, considering that the researchers’ agenda diverges and covers different perspectives. According to White (2013) and Sollund (2015), it is possible to identify different branches within Green Criminology, as can be seen in Table 3.

Sollund (2015) defends the perspective of Critical Green Criminology and emphasizes its role in neutralizing the damage caused by agents of power structures. In this sense, it is up to the field to critically examine, unmask and deconstruct this damage to expose who the actual offenders are, the possibilities afforded them to execute these crimes within a legal framework and to explore how injustice is produced. It also highlights the role of showing who the victims of environmental damage are, giving voice to those victims and proposing political implications for remedies.

More recently, Brisman and South (2018b) presented Green Criminology as “the study of environmental crimes and harms affecting human and non-human life, ecosystems and the biosphere” (Brisman & South, 2018b, p. 1). The definition demonstrates that the research field has expanded its studies to not only include acts and violations legally understood as a crime, but also harmful acts which, although not described as a crime in law, can be as dangerous as those provided in the legislation (Sollund, 2015). This perspective marks a clear distinction between Green Criminology and Traditional Criminology by placing it in the field of Critical or Radical Criminology. Another important point of the definition is the perception of the victim category which not only includes the human species, but also the ecosystem and non-human species.

Table 3. Branches of Green Criminology

Branches	Key Concepts and Concerns	Papers
Radical Green Criminology	Ecological, environmental and species justice; Anti-capitalist, anti-anthropocentric (or human-centred); Environmentalism, animal rights.	Stretesky et al (2013); Lynch & Stretesky (2014).
Eco-Global Criminology	Climate change; Transnational environmental crime; Ecological justice	White (2011); White (2012); White (2017).
Conservation Criminology	Conservation; Natural resource management; Risk assessment and analysis	Gibbs <i>et al</i> (2010).
Environmental Criminology	Situational crime prevention; Market reduction approach; Illegal wildlife trade.	Wellsmith (2010).
Constructivist Green Criminology	Language of criminological analysis; Subjective elements of crime constitution; Media studies.	Brisman (2012).
Speciesist Criminology	Specieism as a form of discrimination; Abuse of animals, including factory farms; Illegal wildlife trade.	Beirne, (2009); White (2013).
Historical Criminology	History of crimes against animals History of animal-human relationship	Beirne (1994, 2009); Yestehede (2012).
Green Cultural Criminology	Media representation of environmental crimes; Social resistance and transgression; Consumer culture of natural resources	Ferrel (2013); Brisman & South (2014); Brisman, McClanahan & South (2014); Natali & McClanahan (2017); Redmon (2018); van Uhm (2018); Brisman (2019).

Source: Elaborated by the author based on White (2013) and Sollund (2015)

Brisman and South (2018a) also present an overview of the field of research that deals with Green Criminology, dividing it into three broad areas: (1) the causes, consequences and the predominance of environmental damage and crime; (2) the prevention and response to crime and environmental damage by the legal judicial system (both criminal, civil and regulatory), as well as by social movements and non-governmental entities; and (3) the meaning and media representations of environmental crimes and damage.

Research about the “causes, consequences and the predominance” includes studies involving both violations of existing environmental laws, as well as investigations into environmental harm not defined in legislation. It involves criticism of capitalist expansion and business, and highlights common acts that contribute to ecocide⁴. Research in this area takes into account who commits the crime and why, at the micro (caused by individuals), the medium (groups, including organized crime), and the macro (including corporate, state or corporate-state crimes) levels.

Crimes perpetrated in the medium and macro levels are the most devastating in scale and damage extent, and have been the focus of green crime research. Research shows that corporate decision-making that leads to environmental crime is more complex than simply explaining rational choice of profit over environmental preservation (Wolf, 2011). In addition, there is often a partnership between organized crime, corporations, and political representatives in the interpretation of environmental crime/harm (Ruggiero & South, 2010; Ruggiero & South, 2013a). In this sense, Ruggiero and South (2013a) argue that a complete understanding of environmental crimes requires an analysis of the illegal behaviour of conventional criminal organizations, as well as the illicit practices of legitimate economic actors, such as corporations and political representatives. They also argue that a radical critique of the economic development process, which calls for unrestricted growth, is necessary to prevent environmental harm.

In turn, individual-level environmental crimes have been receiving little attention (Wolf, 2011; Brisman & South, 2018b). In this perspective, Brisman and South (2018b) argue that greater attention should be paid to ordinary acts and omissions caused by individuals or groups of individuals. However, the authors point out that this view does not suggest the expansion of the criminal justice system and the criminalization of ‘ordinary’ acts and

⁴ Ecocide is defined by Higgins (2010) as “the extensive damage to, destruction of or loss of ecosystem(s) of a given territory, whether by human agency or other causes, to such an extent that peaceful enjoyment by the inhabitants of that territory has been severely diminished”.

omissions that contribute to ecocide. It seeks to emphasize both individual and collective responsibility for actions that may be harmful to the environment.

Within this scope, research also focuses on what and who is being impacted or degraded, highlighting the disproportionate impacts which mainly affect minorities and disadvantaged populations, as well as non-human species. However, the study of environmental victimization has received little attention from Green Criminology (Hall, 2014; Spencer & Fitzgerald, 2013). In this sense, some authors have advocated for Green Victimology. Hall (2014) argues that Green Victimology must recognize that the state and powerful corporate groups, controlled by economic interests, play a key role in defining what is accepted or not as environmental crime, as polluting practices are often sanctioned and promoted by these actors in pursuit of industrial and economic development. He also claims that the argument that victims of crime are not equal and do not respond the same way (or at the same time) to their victimization should be applied to a greater extent in relation to environmental crimes. In addition, the author advocates the need to understand the nature and scope of the rights of environmental victims and how these rights relate to the rights of others (including the rights of corporations, states, and other victims).

Studies have addressed the proposed environmental laws and regulations regarding “prevention responses and strategies” and their shortcomings; inadequacies and inefficiencies; the role and potential impact of litigation, environmental courts, and activists; and social movements of resistance and opposition to green crime and damage. They also include the study of previous errors and omissions and the anticipation of future risks and threats, as well as prevention strategies.

In this context, some authors advocate the creation of an international law to anticipate, prevent and prohibit ecocide (Higgins, Short, & South, 2013). Such a crime would make people of superior responsibility (such as company chief executives and government ministers) liable to prosecution for causing or contributing to large-scale destruction of the ecosystem. The debate over the idea of Ecocide as an international crime has been dragging on since 1972, but it was not part of the Rome Statute which codifies the most serious crimes of international concern (genocide, crimes against humanity, war crimes and crimes of aggression). Polly Higgins proposed an amendment to this Statute to insert the crime of Ecocide in 2010. According to the proposal, nations would be legally required to act to prevent ecosystem collapse or destruction, and they have a legal duty to care for the victims, providing assistance to countries suffering from the destruction of ecosystems caused by rising sea levels or other

events such as tsunamis, tornadoes and floods (Higgins, Short, & South, 2013). However, the Rome Statute does not include this amendment to the present day.

Finally, regarding the “meaning and media representations”, some researchers have also addressed the significance of green crimes and harm to individuals or groups of individuals and how they are constructed by the media. This research field generally seeks to integrate Green Criminology with Cultural Criminology (an orientation within the criminology field which aims to understand how crime and its control are constructed, reinforced, and prevented). This approach was named by Brisman and South (2013) as Green-cultural Criminology. From this perspective, the authors state that Green Criminology must seek new ways of critically confronting the intersection of culture, crime, justice, and the environment, and suggest three possible orientations for future research.

The first refers to the contestation of space, transgression, and resistance. The need for Green Criminology to document environmental crime resistance movements is pointed out, as well as to investigate examples of late modern resistance, which challenge the systems and control forms responsible for environmental damage, exploring more artistic, theatrical, and festive activism. The second orientation is related to the media construction of environmental crimes, damage, and risks. Studies that investigate which, why, and how representations of environmental crime and harm through the media have become (or failed to become) influential are suggested. Then the last aspect suggested refers to the built consumption patterns. It is recommended to examine the dynamics of consumer culture that transforms certain natural resources into commodities, selling them as ‘consumer goods’ in a process which contributes to environmental degradation, such as water (Brisman & South, 2013).

Nevertheless, the tourism industry’s relationship with environmental crimes has been under-studied by the Green Criminology field. When analysing some international reports on environmental crimes, there are only a few mentions of tourism phenomenon. For instance, some official reports refer to the loss of revenue from tourism as a consequence of the illegal exploitation of natural resources as they see wildlife tourism as a potential income source for communities that live near endangered species, and a mechanism for wildlife conservation (Banks, et al., 2008; IPEC, 2015; May C. , 2017; Nelleman, et al., 2016; UNEP, 2018).

There are only a few mentions of tourism in academia research. For instance, in a study on environmental crime and green criminology in Eastern Europe, Eman et al. (2013) mention the occurrence of hunting tourism as an environmental issue that affects protected animal species in Croatia and Serbia. Wong (2017) cites the high influx of tourists from mainland

China as a situational condition that encourage the illegal market of worked ivory products in Hong Kong. Furthermore, Lynch, Stretesky and Long (2018) refer to tourist organizations as examples of environmental social control in the Periyas Reserve in India, where two eco-tourist organizations formed by the indigenous youth provide surveillance against poaching. And in a recent study which explored the geographic distribution of environmental violations on U.S. territorial islands through the lens of colonialism, Thomson and Samuels-Jones (2020) identify tourism as one of the criminogenic patterns on the islands, especially on the Virgin Islands, where private tourist actors like resorts/hotels, cruise lines and private states are often in non-compliance with environmental legislation.

Some deviant leisure scholars have recently examined the environmental harms that emerge because of the commodification of leisure (Smith & Raymen, 2016; Raymen & Smith, 2019; Large, 2019; Smith, 2019; White, 2019). In the book ‘Deviant Leisure: Criminological perspectives on Leisure and Harm’ published in 2019, there is a section focused on the environmental harm of tourist activity. For instance, White (2019) reflects upon the contribution of tourism to serious environmental problems on a global level (through carbon emissions), as well as on local levels. According to the author, the deviance lies in the ecological harm which is inflicted as a consequence of tourism-related activities. For White, the essence of the problem is capitalism as a system, which tourism is part of, and which is based upon exploiting natural resources, non-human animals, and people. This system transforms everything in a product to be consumed, including the natural resources of Planet Earth. In tourism, spaces and landscapes are transformed into products and “the formerly free beach front, mountain trail and riverbank are now being sold back to us as pleasurable commodity” (White, 2019). In this sense, although tourism does not extract the natural resources to transform into products, tourism is not that different from other industries, because it commodifies the natural spaces under the capitalist logic of accumulation, growth, and profit, and “profitably, very often means adopting unsustainable practices” (White, 2019, p. 303). White also talks about the paradox of tourism and nature, giving the example of the Maldives, where the economy is based on tourism because of the natural landscapes. The same tourism that contributes to climate change and the rise of sea levels that might cause its disappearance. He claims that tourism is ‘good’ and ‘bad’, and it depends on the circumstance.

Smith (2019) approaches the role of luxury in the harms generated by the tourism industry. Through some examples such as canned hunting, status destinations and ski resorts, the author argues that the drift towards luxury in tourism has exacerbated environmental and

cultural harms. Smith highlights that tourism goes beyond the consumption of physical products (things) to the consumption of experiences, and this has been sold to us as a better level of consumption. However, the experience economy is seen by the author as the essence of luxury today. He also works with two concepts borrowed from ultra-realist criminology, special liberty, and fetishistic disavowal to try to respond the question “why do we commit harm?”. For instance, in the canned hunting situations, individuals feel “free from the external constraints of ethical codes, normative rules or even laws due to the power of wealth creation” (p. 313). In this sense, hunting tourists can hunt despite the environmental harm because they are contributing to the third-world economy and local rural communities. This discourse is observed in lobby hunting groups which claim that these activities generate millions of dollars and thousands of jobs to African economies. According to the author, “the long-term human and ecological harm is computed and translated into an economic figure of value, thereby transforming it into a fundamental good” (p. 313). The fetishistic disavowal concept is associated to this discourse (or excuse), which allows these tourists to repress that they know that their activities cause harm, and act as if they do not know. We all know the general consequences of air travel to climate change, but we act like we are unaware. For Smith this is a moral issue between the individual desire for tourism and the solidarity that is necessary for a prosocial pathway.

In the last chapter, Large (2019) aims to challenge the rhetoric surrounding charity-based tourism (a term coined by the author that encompass volunteering tourism and charity challenges that involve traveling) to consider the environmental harms embedded with it through the frameworks of deviant leisure, consumer capitalism and political ideology. Large examines three main aspects to the popularity of charity-based tourism. First, it is the shift for an experience economy and the valorisation of “collecting moments, not things”, and the perception that consuming experiences is better than consuming products. She emphasizes that this shift does not constitute a rejection of consumerism or authenticity. Second, the perception of alternative tourism as being more responsible, authentic, and focused on sustainability (even though the meaning of “sustainability is hotly contested”) than mass tourism. Therefore, there would be a less commodified travel experience. And third, the positive ethos, which allows for ethical and responsible consumption. She presents Zizek’s perspective of cultural capitalism, in which “consumerism is not distinct from charity and moral responsibility” (Large, 2019, p. 331) and Hall’s *amour-propre* which is a “particular kind of egoism in which the elevation of the self is contingent upon the distinction from and denigration of the other” (Large, 2019, p.

331). In this sense, people that engage in charity-based tourism can fulfil their desires to travel the world, and at the same time they buy “redemption for their consumerism” and distinguish themselves from the others through a “moral superiority”. Large argues that the key to understanding charity-based tourism is to see it as part of the consumer capitalism, instead of a rejection or opposition to it. And she highlights that the more consumers are aware and take personal responsibility for systematic and structural inequalities, the more the system and State responsibility is reduced. “Thus, the well-meaning and globally ethically aware consumer is essentially inadvertently continuing to exacerbate global political, economic and social inequalities created and sustained by neo-liberalism” (Large, 2019, p. 339). The author presents some environmental harms associated to alternative tourism and charity-based tourism. For instance, even though natural parks charge entrance fees to visitors, the value collected is often not enough to pay to restore habitats or for wildlife conservation. In addition, the growth of tourism often results in unregulated human settlements. Beyond that, many cases of false animal sanctuaries have been appearing and the impact of untrained and inexperienced volunteers on contact with non-human animals must be investigated.

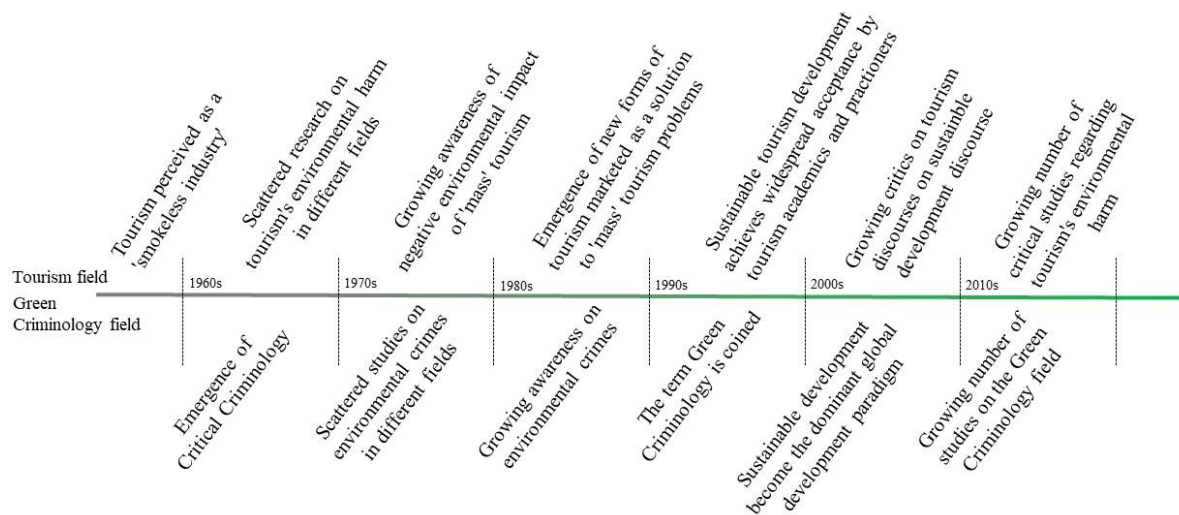
These analyses regarding deviant leisure and how the commodification of leisure impacts tourism activities and the environment bring important insights. However, despite these analyses and a few mentions, tourism is rarely the main research object, even though tourism is one of the largest industries in the world and its environmental impacts have been discussed for around six decades, as previously discussed. Thus, the intersections between these two fields will be analysed in the next section.

3.5 DISCUSSION

Similar to the emergence of Critical Criminology and Green Criminology, the phenomenon of tourism has undergone transformations influenced by debates around social and civil rights movements and environmental issues since the 1960s (Pires, 2002). From this period, the negative impacts of “mass tourism” began to be debated and this type of tourism organization questioned. New tourism forms began to be designed claiming to seek mitigation of these impacts and socio-environmental sustainability. These new forms of tourism were called alternative tourism, and had their focus on the appreciation of culture, the natural environment, and the local community (e.g., ecotourism, cultural tourism, responsible tourism, and more recently, geotourism, volunteer tourism, etc.). The negative impacts of tourism practices in the natural environment also became the focus of some research during this period.

After the 1980s, the term sustainable tourism and sustainable tourism development became extensively used in tourism research and tourism practices and discourses. Furthermore, some alternative organization and tourism development forms emerged in some communities (i.e. community-based tourism). Figure 2 represents this timeline of Tourism and Green Criminology fields.

Figure 2. Timeline of Tourism and Green Criminology field



Source: Elaborated by the author based on the research data (2022)

However, neither the new tourism forms nor the sustainable tourism development discourses and policies were able to hinder the environmental harms associated to tourism practices. Much of the tourism sector remains unsustainable (Higgins-Desbiolles, 2009) and the alternative tourism organization forms have been struggling to survive facing social, environmental, and economic conflict (Urano, 2016). From then until nowadays, it has become clear that tourism is not an environmental-friendly or 'smokeless industry', as some advocated in the past. Tourism impacts the environment in several different forms, inflicting harm on the physical environment, non-human animals, and human animals. Yet it is very complex to identify, monitor, and control these harms (Holden, 2000; Buckley, 2011) and more critical studies are needed in the tourism fields in order to re-think tourism's relationship with the environment.

Next, there are some points based on the literature review of tourism studies that this research would like to highlight. First, the dependency of tourism on the environment. The environment here is perceived as comprising the natural physical setting (such as water, ocean, lakes, rivers, groundwater, etc.; soil, air, and vegetations), non-human animals and human

animals. Human animals cannot be detached from the environment, therefore tourism as a human phenomenon is inseparable from the environment. All tourism practices are environmentally based (Pigram, 1980) and are linked to both natural and human-made environments. Sometimes the environment comprises a more natural setting, and sometimes it comprises a more human-made setting. However, on a local perspective, tourism does not need a pristine environment to survive (Butler, 2000). Tourism as an economic activity needs a product and this is hardly an untouched natural environment, and a lot of the times it is not even a healthy natural environment. A lot of the main destinations are capital cities with reduced natural areas, and bad air and water quality, as observed by Buckley (2011), or totally artificial environments such as casinos, amusement parks, or shopping centres, etc. Likewise, the main attraction for some dark tourist destinations is actually a devastated environment such as Chernobyl.

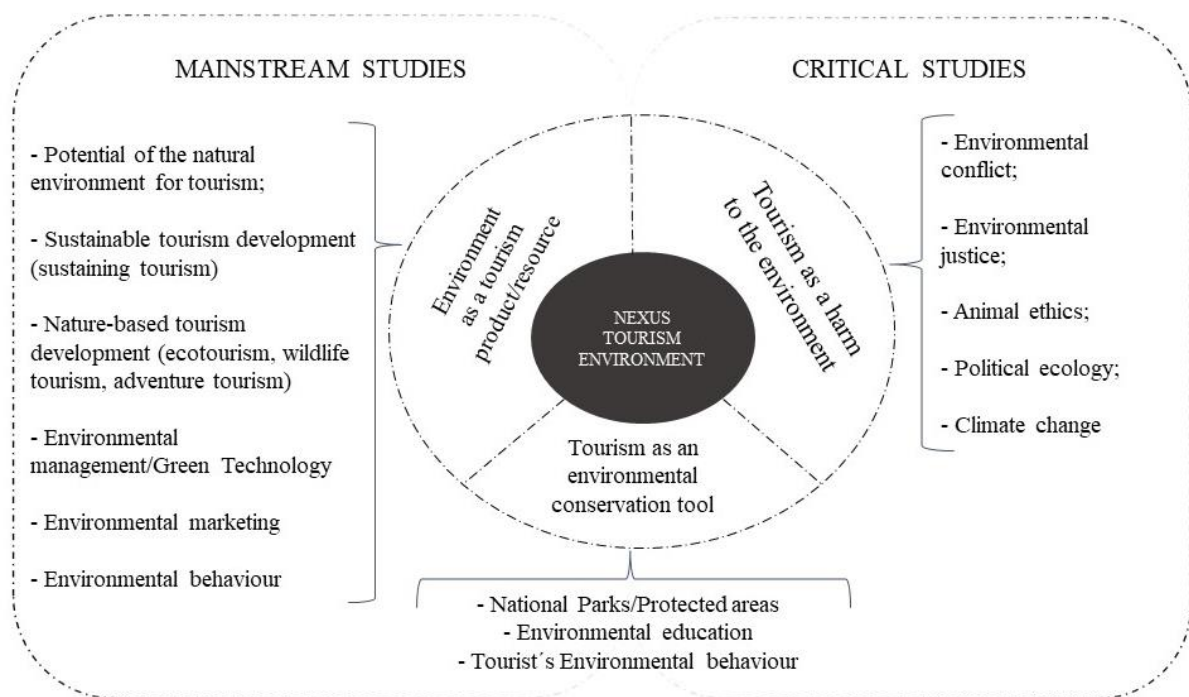
Nevertheless, it is important to remember that environmental problems are not local, but global (as climate change has been showing us). Sometimes it takes a long time for us to perceive this, but one harmed environment will probably impact other areas of the globe, or the whole globe itself. Additionally, these global impacts will be more likely to be felt in this contemporary and globalized world. In this sense, although tourism as an economic activity nowadays does not necessarily need a healthy environment to survive on a local perspective, from a global perspective it does need a balanced natural environment. Human animals need the natural environment and its resources to survive, and the increasing and constant environmental damage which is a consequence of tourism and other economic activities may lead to catastrophic scenarios in the future.

Second, it is important to stress how tourism impacts the environment. Tourism involves displacing individuals from one place to another, and in most cases this displacement requires means of transportation and transportation infrastructure availability, a place to stay in the destination area, and in many cases, equipment to assist tourist experiences such as visitor centres, leisure infrastructure, restaurants, restrooms, etc. The construction and function of these facilities requires natural resources such as water, land consumption of agricultural, livestock, and craft products, which in turn produces waste, litter and sewage that return to the environment. So, as May (1991) states, the environmental impact of tourism practices happens in two ways: through the tourists and their actions and attitudes along their displacement (for instance tourists walking along a natural trail, or when tourists throw rubbish on a beach, or even when they make the decision to travel by air), and through the practices and

facilities/infrastructures of tourism industry (the tourism industry is comprised by other industries which support tourism practices such as food and accommodation, entertainment, transport, etc.) and the State. Therefore, when addressing tourism environmental impacts, it is important to not only focus on tourists' behaviour, but mainly on the tourism industry's practices. It is important to unravel how this industry manages to expand through the most diverse and inhospitable places on the planet and leave its marks when addressing the environmental impacts of tourism.

Third, grounded in the work of Buckley (2011), it can be said that tourism research regarding the nexus tourism-environment comprises three main views: 'environment as a tourism product', 'tourism as a harm to the environment', and 'tourism as an environmental conservation tool'. The research on the nexus tourism-environment in the Tourism field is shown in Figure 3.

Figure 3. Research regarding the nexus tourism-environment in the tourism field



Source: Elaborated by the author based on Buckley (2011)

The view of 'Environment as a tourism product' is common for mainstream tourism studies, while 'tourism as a harm to the environment' is a common view for critical tourism studies. Yet 'tourism as an environmental conservation tool' runs through both studies. This view can be used as a mainstream marketing tool and this view is used in critical studies because

tourism might be seen as a social practice that can transform human behaviour, including the environmental perception of their relationship with nature. One might argue that these perspectives are not exclusionary; it is true and that is the reason why the limits of the figure are dashed, as sometimes the limits among these three views are not well-defined. For instance, one can see the environment as a good tourism attraction, but recognize that tourism causes harm to the environment and because of it there is a need for better environmental management and planning; or one can see contemporary tourism as causing harm to the environment and advocate for ‘another kind of tourism’. In this sense, the figure functions as a spectrum in which each research can be located at different points of it. This demonstrates the complexity of tourism and how sometimes tourism practices and discourses can be contradictory.

Figure 3 also shows the main topics of research on each view. The figure tries to present the main topics, but the topics are not restricted to them. As stated before, critical studies on the nexus tourism-environment remain on the side-lines and the main view is tourism causes harm to nature. In this sense, the main research agenda is on the topics of environmental conflict, environmental justice, animal ethics, political ecology, and climate change.

Based on the literature review exposed previously, ‘environmental crime’ in its legal approach has not been studied in the tourism field, nor is the Green Criminology theoretical framework represented. However, it was also shown that some scholars of the Green Criminology field have a broader perspective of environmental crimes, which not only include crimes prescribed in the legislation or violations of regulations, but also harms which are not in the law. Through this perspective, it could be said that environmental crimes have been approached in some critical studies of environmental impacts of tourism. In this sense, here it is encouraged that critical tourism studies which work from the perspective of tourism as a harm to the environment use the Green Criminology theoretical framework as an umbrella framework which can encompass all of the topics studied from the critical perspective (environmental justice, political ecology, animal ethics, etc). It is important to highlight here that using the Green Criminology framework will not exclude these other approaches since they dialogue with it, and they can also be used to explain the concrete reality.

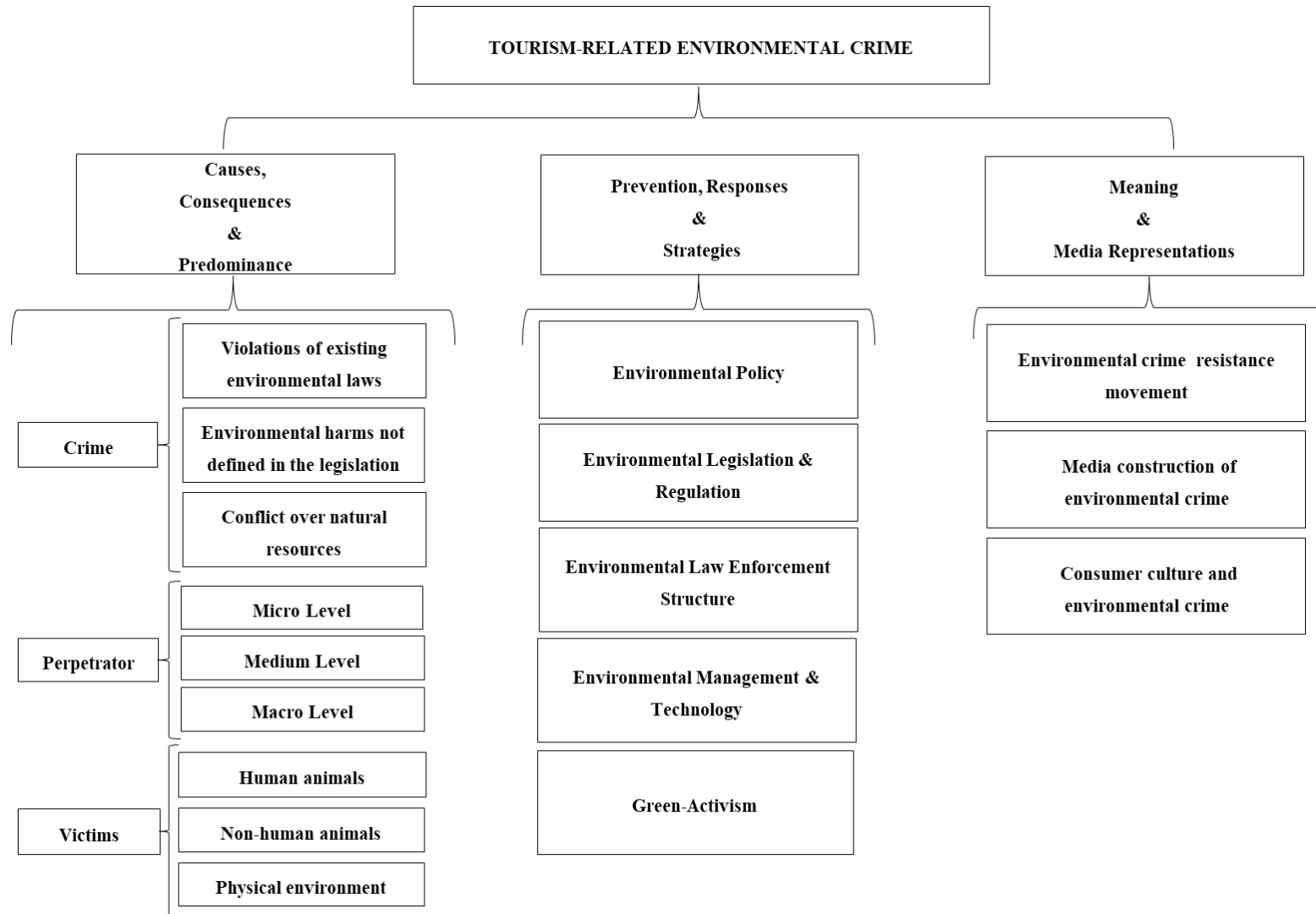
Considering all the above, the literature review on Green Criminology and mainly based on Brisman and South (2018a), a theoretical framework is proposed in Figure 4 to help researchers in the tourism field to address tourism environmental harm through a critical perspective, which focuses on understanding the processes which allow environmental crimes to occur in order to challenge them.

Based on this framework, critical tourism studies would address three main topics: ‘Causes, consequences, and predominance of environmental harms’, ‘Prevention Responses and Strategies’ and ‘Meaning and Media Representation’. There are three points of view under the first topic for which researchers should focus their attention: (1) tourism-related crimes on the natural environment which could be a violation of existing environmental laws, environmental harms which are not defined in the legislation, or a conflict over a natural resource (like water issues); (2) who are the perpetrators, which could be on a micro level (tourist actions and attitudes that damage the environment), medium level (tourism enterprises), and/or macro level (tourism industry and state development); (3) and the victims, which could be the physical environment itself (such as a polluted river), non-human animals (which can address animal ethics theories) and human animals (which can address environmental justice issues, for instance).

The second topic regards the prevention responses and strategies and can address 5 main issues: (1) ‘Environmental policy’, which can include tourism policy regarding the environment; (2) ‘Environmental legislation’, which can also include tourism legislation regarding the environment; (3) ‘Environmental law enforcement structure’ and how tourism superstructure is connected to it; (4) ‘Environmental Management & Technology’ (and how they are used and if they are useful tools to reduce environmental crime in the tourism sector); and (5) ‘Green Activism’ and how host communities, social movements and non-governmental organizations react to tourism-related environmental crimes.

The third and last topic considers the meaning and media representation of environmental crimes. This topic can also address the representation of the resistance movements to tourism’s environmental crime, the media construction of environmental crime caused by the tourism sector, and consumer culture which leads to an over necessity to travel, overtourism, and environmentally-damaging attitudes.

Figure 4. Green Criminology theoretical framework



Source: Elaborated by the author based on Brisman and South (2018a)

This framework is not intended to be a fixed structure, but a relational framework in which all the topics are connected and part of a whole. However, one study can hardly comprise all of these aspects, and so researchers are invited to mix them up and work with more than one aspect for a more complex understanding. Hopefully this framework will help researchers to broaden the research agenda on tourism environmental impacts from a critical perspective, perceiving them as environmental crimes (in the broader sense of the term), and study the oppression processes connected to them in order to, as Sharpley (2020) states, re-think how tourism is produced, managed, and consumed.

3.6 FINAL CONSIDERATIONS

This chapter attempted to understand how the Tourism and Green Criminology fields interconnect in the world literature. In order to do so, it presented and discussed Tourism literature on the nexus tourism-environment as well as Green Criminology literature.

The discussions showed that although the tourism-environment theme has been studied for over six decades, the debates around the subject have mainly focused on the mainstream perspective that view the environment as a tourism product and/or a resource. It also demonstrated that studies on this theme were much influenced by the sustainable development paradigm that emerged in the 1990s. However, the discourses on sustainable tourism practices have become a void throughout the years and have greenwashed discourses regarding the tourism sector. The studies on tourism and environment did not evolve as they should have and, despite gaining more attention in the last decade, more critical approaches have been understudied. The discussion also unravelled that the Green Criminology field has not been used as a conceptual framework in studies on tourism's environmental impacts and that the legal approach of environmental crimes has not been the subject of attention in enough tourism studies. At the same time, tourism has rarely been studied as the perpetrator of environmental crime and harms by Green Criminology.

In addition, this study highlighted that tourism is inseparable from the environment. However, although tourism does not need pristine nature or even a healthy environment for its practice on a local basis, there is a need to perceive tourism's environmental harm as a global problem which not only affects tourism itself or tourist destinations, but the globe as a whole. It also stressed that tourism harms the environment in two ways: through tourist practices and through the tourism industry and State practices. Nevertheless, in order to rethink how tourism

is produced, it is necessary to tackle the tourism industry's and State's practices towards the environment, because these will shape tourist practice.

In addition, this study proposed a Green Criminology framework to address tourism's relationship with the environment through a critical approach. This framework is intended to be a guideline or a roadmap for researchers to address tourism environmental impacts from a critical perspective which views these impacts as crimes that will not only affect the planet's ecosystems, but also human-animals and tourism practice as well. As some scholars advocate, tourism can greatly benefit from the intersection of other fields. Green Criminology can bring some new perspectives on the nexus tourism-environment, in turn introducing a more critical approach into tourism studies regarding the topic of environmental impacts. Moreover, in the same sense Green Criminology can benefit from studying environmental crimes of the tourism phenomenon.

4. TOURISM AND ENVIRONMENTAL CRIMES: AN ANALYSIS OF THE ENVIRONMENTAL INFRACTION NOTICES RELATED TO TOURISM IN BRAZIL

4.1 INTRODUCTION

This fourth chapter intends to answer the question: “what are the patterns of tourism-related environmental crimes?”. Brazil was chosen as a study case to identify these patterns, and its official data on environmental crimes were analysed. It is worth mentioning that the debate around environmental crimes encompasses different perspectives. Skinnider (2011) cites the legal-procedural, the social-legal and the sociological approaches. The legal approach is the narrow one that only considers environmental crimes as activities which are violations of criminal laws. The socio-legal perspective is broader and also included regulatory and administrative violations, which “equates crime to any illegal activity or formal rule-breaking” (Skinnider, 2011, p. 17). This is important because environmental offences are not included in the criminal code in some countries. The sociological perspective is even broader, as it considers actions which might be legal, but are harmful to the environment. In this sense, it is important to highlight that this study acknowledges that environmental crimes need to be perceived beyond the legal and socio-legal approaches. But it also sees that exploring the official data is a first step to unravel how tourism is related to environmental crimes. In addition, to acknowledge the official data is paramount to improving the mechanism of control and prevention of environmental crimes.

This chapter focuses on two topics of the proposed framework (see Figure 4 in the previous chapter): ‘Causes, Consequences and Predominance’ and ‘Prevention responses & Strategies’. Thus, the patterns of tourism-related environmental crimes as well as the patterns of the offenders are addressed in the first topic. Next, Brazilian environmental policy and legislation as well as the environmental law enforcement system are discussed in the second topic. This discussion was important to construct the methodology to put together the official Brazilian data about environmental crimes and to better analyse the collected data.

In this sense, the results are first presented through a review of how legislation and policies regarding the environment in Brazil have evolved, what they are based on and what they comprise. Next, the environmental law enforcement system and process are presented. The information available from the Brazilian governmental institutions is then analysed, aiming to explore the patterns of environmental crimes related to tourism and how the legal system works to prevent environmental damage perpetrated by tourism.

4.2 BRAZILIAN ENVIRONMENTAL LEGISLATION

According to *UNEP* (2018), it is important that nations have a strong legal framework regarding environmental crimes. It also states that countries which have environmental legislation dispersed across several texts might make it difficult for its implementation by enforcement agencies.

Freira (2015) identifies four cycles in the development of the environmental legislation in Brazil. The first cycle, which started from the arrival of Portuguese to Brazilian lands, cannot be characterized as real environmental law. There was a lack of control over public lands, and the legal provision at the time was generally aimed to regulate the process of land use. Freira cited the Civil Code of 1916 as one important first legal provision regarding the protection of natural resources, in which Article 584 prohibited construction capable of polluting pre-existing water sources or wheels.

The second cycle attempted to regulate natural resource exploitation, and it encompassed several sectoral legal provisions such as the Water Code of 1934 (*Código das Águas*), the Forest Code of 1934 (*Código Florestal*), the New Forest Code of 1965 (*Novo Código Florestal*), the Fishing Code of 1938 (*Código de Pesca*), the New Fishing Code of 1967 (*Novo Código de Pesca*), the Ore Code of 1940 (*Código de Minas*) and the Mining Code of 1967 (*Código de Mineração*).

The third cycle was characterized by sector-specific acts of pollution control. Freira (2015) highlights the first National Development Plan (*I Plano Nacional de Desenvolvimento - PND*), approved by Law 5,727 of 1971, which had some provisions regarding the relation of human beings with the territory, encompassing environmental aspects. The second *PND*, instituted by the Law 6,151 of 1974, established some procedures for industrial pollution control, and the Decree-law 1,413, of 1975, established legal guidelines for pollution control caused by industrial activities. Despite the existence of several legal provisions regarding the environment, Freira states that the Brazilian environmental legislation was spread across a range of different legislation until 1980, and its main concern was to regulate human exploitation of natural resources, and not environmental protection itself.

However, the fourth cycle attempted to establish a systemic and interdisciplinary perspective for environmental legislation. For instance, Law 6,938 in 1981 instituted the National Environmental Policy (*Política Nacional de Meio Ambiente - PNMA*), which is considered to be Brazilian environmental regulation's cornerstone (Drummond & Barros-Platiau, 2006). The *PNMA* established principles, guidelines, and duties regarding the

environment. It also created the National Environmental System (*Sistema Nacional de Meio Ambiente* - SISNAMA) and the National Environmental Council (*Conselho Nacional de Meio Ambiente* - CONAMA).

Next, the new Federal Constitution in 1988 devoted one entire chapter to environment quality (Chapter VI), becoming the foundation for systematizing the country's environmental legislation. The Constitution refers to the environment as “a common good of the population and essential to a healthy life quality” and states the “right to an ecologically balanced environment” for everybody (Brasil, 1988). It also imposes the obligation on both the government and society to defend and protect the environment for the present and future generations. The Federal Constitution influenced the adoption of environmental regulation at the state and municipal levels. It also assigned important roles regarding environmental protection to public authorities, such as: (1) the promotion of ecological management of species and ecosystems; (2) protection of biodiversity and control of genetic resources; (3) creation of protected areas; (4) obligation of public authorities to demand Environmental Impact Studies (*Estudo de Impacto Ambiental* - EIA) for companies or constructions potentially harmful to the environment; and (5) promotion of environmental education. In addition, the Federal Constitution establishes that companies, as well as individuals, will be liable to sanctions in case of environmental violations, instituting three kinds of liabilities: administrative, civil, and criminal.

The inclusion of the environmental theme in the scope of the Federal Constitution of 1988 was an important step. Nevertheless, nowadays there are more advanced National Constitutions concerning the environmental theme such as the Constitutions of Ecuador (2008) and Bolivia (2009). For example, the Constitution of Ecuador considers that we, human animals, are part of nature (*Pacha Mama*), and that nature is vital to our existence. For the first time, it introduces nature as being a subject with rights, stating that “*la naturaleza o Pacha Mama, donde se reproduce y realiza la vida, tiene derecho a que se respete integralmente su existencia y el mantenimiento y regeneración de sus ciclos vitales, estructura, funciones y procesos evolutivos*” (Ecuador, 2008). This marks a disruption and displacement of anthropocentric values which only attributed human animals as being the exclusive source of subjective and fundamental rights (Wolkmer, 2014). In addition, these Constitutions introduced the conception of “*buen vivir*”, experienced by indigenous movements based on a “*cosmovisão*” that considers and values the interconnection and the interdependence of all the elements of *Mãe Terra* (Mother Earth). This concept emerges as an alternative to anthropocentric development which

values economic growth and presents an alternative sustainability which focuses on a balanced living arrangement between human animals and the natural environment. Despite it being too early to determine if this new constitutionalism will in fact be effective in ensuring the preservation of a healthy and balanced environment, it is an important attempt to change the way human animals relate to the environment.

Notwithstanding these two important legal provisions (*PNMA* and the Constitution), the scattered environmental legislation in Brazil still made law enforcement difficult. On February 12th of 1998, the Environmental Crimes Act, Law 9,605 (*Lei de Crimes Ambientais - LCA*) was promulgated (Drummond & Barros-Plataiu, 2006; Freira, 2015; Schmitt, 2015) to consolidate and add enforcement capabilities to previous laws. *LCA* gathered both criminal and administrative penalties for different harmful activities against the environment (see Table 4), and it considered collective entities, such as companies or organizations, as active subjects of environmental crimes, including managers and employees (Drummond & Barros-Plataiu, 2006; Schmitt, 2015). Later, Decree 6,514 of 2008, regulated sanctions for administrative violations against the environment and the federal administrative process.

Other legislation regarding environment protection and sustainable development was promulgated during this cycle. For example, Law 9,795 in 1999 established the National Environmental Education Policy (*Política Nacional de Educação Ambiental - PNEA*); Law 9,985 in 2000 created the National System of Nature Conservation Units (*Sistema Nacional de Unidades de Conservação da Natureza - SNUC*); Law 12,187 in 2009 instituted the National Policy for Climate Change (*Política Nacional sobre Mudanças Climáticas - PNMC*); and the National Solid Waste Policy (*Política Nacional de Resíduos Sólidos - PNRS*) was established by Law 12,305 in 2010.

In addition to the legal provisions, there are still various principles which enable interpreting the statutory rules aiming to maximise the effectiveness of environmental protection. They are either implicitly or explicitly included in the statutory environmental law such as human dignity in its ecological dimension, ecological function of private property, sustainable development; environmental equity, public participation principle, polluters' pay principle; prevention and precautionary principles (UNEP, 2018).

Table 4. Types of violations in Brazilian legislation

TYPES	CRIMES
Crimes against fauna	Illegal poaching
	Habitat destruction
	Illegal trade of wildlife and amphibian and reptile skin and leather
	Invasive species via human transport
	Animal abuse
	Wildlife loss
	Illegal fishing
Crimes against flora	Animal testing and experimentation.
	Vegetation loss
	Illegal logging
	Illegal trade
	Deforestation
	Forest fires
	Illegal extraction of mineral
Pollution and other crimes	Destruction of ornamental plants of public spaces
	Air pollution
	Water pollution
	Sea pollution
	Illegal dumping of toxic waste
	Illegal potentially polluting construction or service provision
Crimes against the urban planning and cultural heritage	Disseminate harmful diseases, pests or specimens
	Cultural heritage damage or destruction
	Illegal construction in place of environmental and cultural heritage
Crimes against environmental administration	Illegal graffiti
	Corruption
	Document Fraud
	Hinder inspection

Source: Elaborated by the author according to Law 9,605/98 (2022)

It is also worth noting that from the United Nations ‘Earth Summit’, which occurred in Rio de Janeiro in 1994, Brazil adopted a global leadership position on environmental conservation policies. However, the approval of the New Forest Code in 2012 is identified as a turning point of this position by many congressmen and lobbyists. The Code was supposed to update the regulation regarding management of natural terrestrial ecosystems, but instead it provided amnesty for illegal deforestation offenders, reduced the legal protection of some biomes, and resulted in increased rates of deforestation (Abessa, Famá, & Buruaem, 2019). It also influenced a range of legislative activities promoted by representatives of agribusiness and the mining sector which targeted environmental protection legislation. Meanwhile, environmental agencies had been suffering from a reduction in their staff and economic resources. A lot of bills which could cause a negative impact on the environment protection are currently under discussion in the Federal Congress. For instance, the Law Project (*Projeto de Lei - PL*) 3,729/2000 can be cited, which aims to eliminate or reduce restrictions to the environmental licenses; *PL* 6,299/2002, which aims to establish new regulations of use and sale

of pesticides; *PL 6,268/2016* and *PL 436/2014*, aiming to permit hunting wild animals in Brazil; and also the Constitutional Amendment Proposal (*Proposta de Emenda Constitucional - PEC*) 215/2000, which seeks to prevent demarcation procedures for new indigenous and protected areas.

According to Abessa *et al.* (2019), all of the abovementioned bills have resulted in the dismantling of Brazil's environmental legislation, which is likely to be accelerated due to the election of Jair Bolsonaro in 2018. Bolsonaro's government has its focus on economic growth and considers environmental regulation, as well as legal protection of the rights of indigenous and traditional communities, to be obstacles to this goal. In addition, Bolsonaro's government has an ideological wing influenced by climate-change and science deniers. In the first year of his government, seven prior ministers of the environment from different governments, together with the Brazilian Bar Association (*Ordem dos Advogados do Brasil - OAB*), the Brazilian Society for the Progress of Science (*Sociedade Brasileira para o Progresso da Ciência - SBPC*), Articulation of Indigenous Peoples in Brazil (*Articulação dos Povos Indígenas do Brasil*), and the Brazilian Press Association (*Associação Brasileira de Imprensa - ABI*) denounced the dismantling of federal environmental agencies, environmental protection policies and programs, and the Amazonia Fund by Bolsonaro's government (Minc, et al., 2019). Moreover, the dismantling of environmental and indigenous agencies has only gotten worse throughout Bolsonaro's administration; but it is not the aim of this study to discuss the environmental crimes perpetrated by this government.

Considering the above, it can be said that Brazil has a new environmental legislation cycle in addition to Freira's cycles. This new cycle is characterized by attempts to undermine environmental protection, which can not only cause irreversible impacts to Brazil's environmental balance and human health quality, but is also likely to have global consequences.

4.3 ENVIRONMENTAL VIOLATIONS' LIABILITIES AND LEGAL PROCESSES

As mentioned above, the legal provision in Brazil establishes three types of liabilities for environmental infractions: administrative, civil, and criminal. Each one of them has its own purpose, and their sanctions are cumulative (Schmitt, 2015).

The administrative liability is regulated by Decree 6,514, of 2008. It considers "any action or omission that violates legal rules use, enjoyment, promotion, protection and environmental recovery" as an environmental administrative infraction. The Decree establishes

10 types of sanctions for administrative infraction: (1) warning; (2) simple fine; (3) daily fine; (4) confiscation of animals, products and by-products of fauna and flora, instruments, items, equipment or vehicles of any nature used in the infringement; (5) destruction of products; (6) suspension of sale and manufacture of product; (7) embargo of work or activity and their respective areas; (8) demolition of constructions; (9) partial or total suspension of activities; and (10) restriction of rights.

Penalties involving the restriction of rights for individuals and companies include: (1) suspension of registration, license, or authorization; (2) cancellation of registration, license or authorization; (3) loss or restriction of incentives and tax benefits; (4) loss or suspension of participation in financing lines in official credit institutions; and (5) prohibition to contract with the public administration.

The environmental administrative sanctioning process comprises four stages (infraction detection, inspection action, judgment, and enforcement of sanctions), which are interdependent. The first stage (infraction detection) attempts to identify evidence of infractions in order to lead the decision-making process for coercive measures. There are a lot of ways in which this detection can occur, such as intelligence activities, monitoring, and reports from the public or other organisations (Schmitt, 2015).

In the second stage, evidence of the infractions collected during the inspection is gathered. If there is evidence, an infraction notice is issued, and intervention measures can be ensued to cease or reduce the damage. In the third stage, the administrative process is installed and analysed by the competent authority. The public administration will enforce the sanctions in the last stage and notify the Prosecutor's Office (*Ministério Público - MP*) about the environmental crime, which will then decide whether to address any civil or criminal liabilities (Brito, Barreto, & Rothman, 2005). Schmitt (2015) highlights the struggles to enforce the assigned sanctions, as offenders often do not pay the fines, and it is difficult to enact mechanisms to repair the environmental damage.

Regarding civil liability, the *PNMA* establishes the offender's obligation to compensate and repair the environmental damage caused by their activities. A compensation alternative occurs when there is no possibility of damage reparation. Environmental civil liability works as any other kind of reparation under the civil liability regulation (Schmitt, 2015). The prosecution for environmental crimes is public and representation is not necessary, which means that the *MP* has the duty to assess the report of a crime when they receive it, deciding whether to prosecute or file the case. This can be made by both the Federal or State Prosecutor's

Offices (*Ministério Público Federal - MPF*, or *Ministério Público Estadual - MPE*), depending on the jurisdiction of the infraction. When the *MP* decides to prosecute, it often tries to negotiate a settlement with the offender, aiming for environmental damage repair. If there is no settlement, the *MP* initiates a public civil action.

It is worth noting that Law 7,347 of 1985, known as the Public Civil Action Law (*Lei da Ação Civil Pública*), allowed public civil action against individuals who cause damage to historical, environmental, and/or touristic heritage. After this provision, judges, district attorneys, public agencies, foundations, individual citizens, and one-year-old civil organizations can initiate a public action to bring offenders before justice for damage repair and redress (Drummond & Barros-Platiau, 2006).

Regarding criminal liability, *LCA* prescribes both ‘restriction of liberty’ and ‘restriction of rights’ penalties. The ‘restriction of rights’ penalty can substitute the ‘restriction of liberty’ penalties when the maximum sentence is four years, or the minimum sentence is under one year. Most of the penalties in the *LCA* are 4-year maximum sentences, and therefore most environmental crimes are not punished with prison, but with alternative sentences such as community service; temporary interdiction of rights; partial or total suspension of activities; cash fine; and/or home imprisonment (Brito, Barreto, & Rothman, 2005). In every case, penalties should aim for environmental damage prevention and repair.

Despite environmental damage prevention and repair being an important goal in the Brazilian legal provision, this is not what has been happening in practice. The Institute of Human and Environment of Amazonia (*Instituto do Homem e Meio Ambiente da Amazônia - IMAZON*) has carried out some studies regarding the effectiveness of the law enforcement for Amazonian forests protection. For example, a study by IMAZON showed that an average of 95% of the proposals during 2000-2003 involved social assistance and only 5% environmental reparations (Brito, Barreto, & Rothman, 2005). Another IMAZON study of 2009, in which 51 legal processes against 46 environmental crimes in Amazonian Protected Areas in the State of Pará between the years 1991 and 2006 were analysed, showed that there were 21 settlement proposals and only 28.5% of them had some kind of environmental compensation established (Barreto, Araújo, & Brito, 2009).

4.4 BRAZILIAN ENVIRONMENTAL LAW ENFORCEMENT SYSTEM

Several environmental agencies were created over the years to enforce environmental law and policy in Brazil, which, according to Freira (2015, p. 177), formed an “anachronistic

institutional mosaic”, which is unsystematic, often overlaid and confusing. The public agencies responsible for environmental law enforcement are those which are part of National Environmental System (*Sistema Nacional de Meio Ambiente - SISNAMA*) (see Table 5) and are part of the Executory Bodies, the Sectional Bodies, and the Local Bodies.

Table 5. SISNAMA Structure

TYPE	OFFICIAL INSTITUTION	ROLE
Superior Body	Governing Council	Advise the President of the Republic on the elaboration of the national policy and governmental guidelines for the environment and natural resources
Deliberative and Advisory Body	CONAMA	Advise, study and propose to the Government Council, environment and natural resources guidelines for government policies and deliberate, within its competence, on norms and standards compatible with an ecologically balanced and essential to a healthy quality of life environment
Central Body	Ministry of Environment*	Plan, coordinate, supervise and control, as a federal agency, the national policy and the governmental guidelines established for the environment
Executory Bodies	IBAMA/ICMBio	Execute and enforce the government policy and guidelines established for the environment, in the federal level
Sectional Bodies	Federal District and States Environment Department	Conduct programs, projects, as well as control and inspect activities capable of causing environmental degradation in the State level
Local Bodies	Municipalities Environmental Department	Conduct programs, projects, as well as control and inspect activities capable of causing environmental degradation in the local level.

*The Central body was initially called Environment Secretariat of the Presidency of the Republic, later it was transformed into the Ministry of Environment.

Source: Elaborated by the author according to Law 6.938/81

The main federal agency responsible for environmental law enforcement is the Brazilian Institute of the Environment and Renewable Natural Resources (*Instituto Brasileiro de Meio Ambiente e Recursos Naturais Renováveis - IBAMA*). It is assigned to register and receive information of transgression from society and other agencies/authorities. It can also investigate and gather intelligence, as well as sanction administrative illicit environmental activities. Another agency part of the *SISNAMA* is the Chico Mendes Institute for Biodiversity Conservation (*Instituto Chico Mendes para a Biodiversidade e Conservação - ICMBio*). It is responsible for law enforcement of the National Conservation Units Policy concerning management of the protected areas created by the Federal Government. It has the duty to register crimes committed in/against its protected areas and issue administrative sanctions.

There are also other special federal agencies which are not part of the *SISNAMA*, but have police power to control, detect and sanction administrative illicit acts or omissions under their jurisdiction. For instance, the National Historical and Artistic Heritage Institute (*Instituto do Patrimônio Histórico e Artístico Nacional - IPHAN*), which is responsible for the preservation of historic and cultural value, is assigned to register damage to archaeological sites (considered to be an environmental crime by the *LCA*) and issue fines and administrative sanctions. The National Indigenous Foundation (*Fundação Nacional do Índio - FUNAI*), responsible for the Indigenous policy in the country, is assigned to communicate to police and the Prosecution's Office if any violation to Indigenous rights in connection to environmental crimes is detected (*UNEP*, 2018).

According to the *CF* of 1988 (Article 23), it is of common competence of the federated entities (Federal Government, Federal District, States, and the Municipalities) to protect the environment, as well as to combat pollution in any of its forms, and to preserve forests, fauna, and flora. In practice this means that more than one entity can exercise the same activity. However, as stated by Guerra (2015), several problems were created due to an absolute lack of definition of the exercise of administrative powers related to the environment. Nowadays, all the States and the Federal District have an environmental state department with police power competency (Schmitt, 2015). Municipalities should also have a local environmental department, but not all of them have this yet.

The *CF* also states that a Complementary Law (*Lei Complementar - LC*) would establish the rules for this federative cooperation, but a Complementary Law was only promulgated in 2011. *LC* 140 of 08/December/2011 set standards for federative cooperation in administrative actions arising from the exercise of common competence regarding environmental protection. The law attempted to minimize jurisdiction conflicts by establishing the responsibility for environmental licensing, control, and application of the administrative sanctions to a single environmental agency (Guerra, 2015). In the matter of environmental control, *LC* 140 ensures that in the exercise of police power in case of simultaneous inspections and administrative assessments, the environmental infraction notice issued by the agency that has the competence for licensing will prevail (For more information on the competencies of each federated entity, see *LC* 140 of 08/December/2011).

Under criminal liability, the Police in all three levels (Federal Police, State Police and Military Police) also have the police power to detect and investigate environmental crime under their jurisdiction. The Federal and State Prosecutor's Office can also promote civil investigation

and public civil action for the protection of the environment (Brasil, 1988). In addition, the Supreme Courts in Brazil determine that the Prosecutor's Office can investigate on its own, for example, in case of Police omission, or when the crime involves police officers.

4.5 METHODOLOGY

This element of the study focused on collecting and analysing available secondary data regarding environmental crimes related to tourism activity in Brazil. The first step of the methodological process consisted of a desk research exercise which focuses on the relationship of tourism and the natural environment, as well as the Brazilian environmental legislation. During this process, some scientific papers and the related legislation were gathered to better understand how the environmental legislation evolved and what it compasses. It also attempted to understand how environmental crimes are addressed in Brazil, as well as how law enforcement and the sanctioning process are carried out. This stage was important in order to draw out a path in which information on environmental crimes could be accessed and gathered, making it possible to identify some keys institutions such as: *IBAMA*, *ICMBio*, *MPF*, and Federal Justice (*Justiça Federal - JF*).

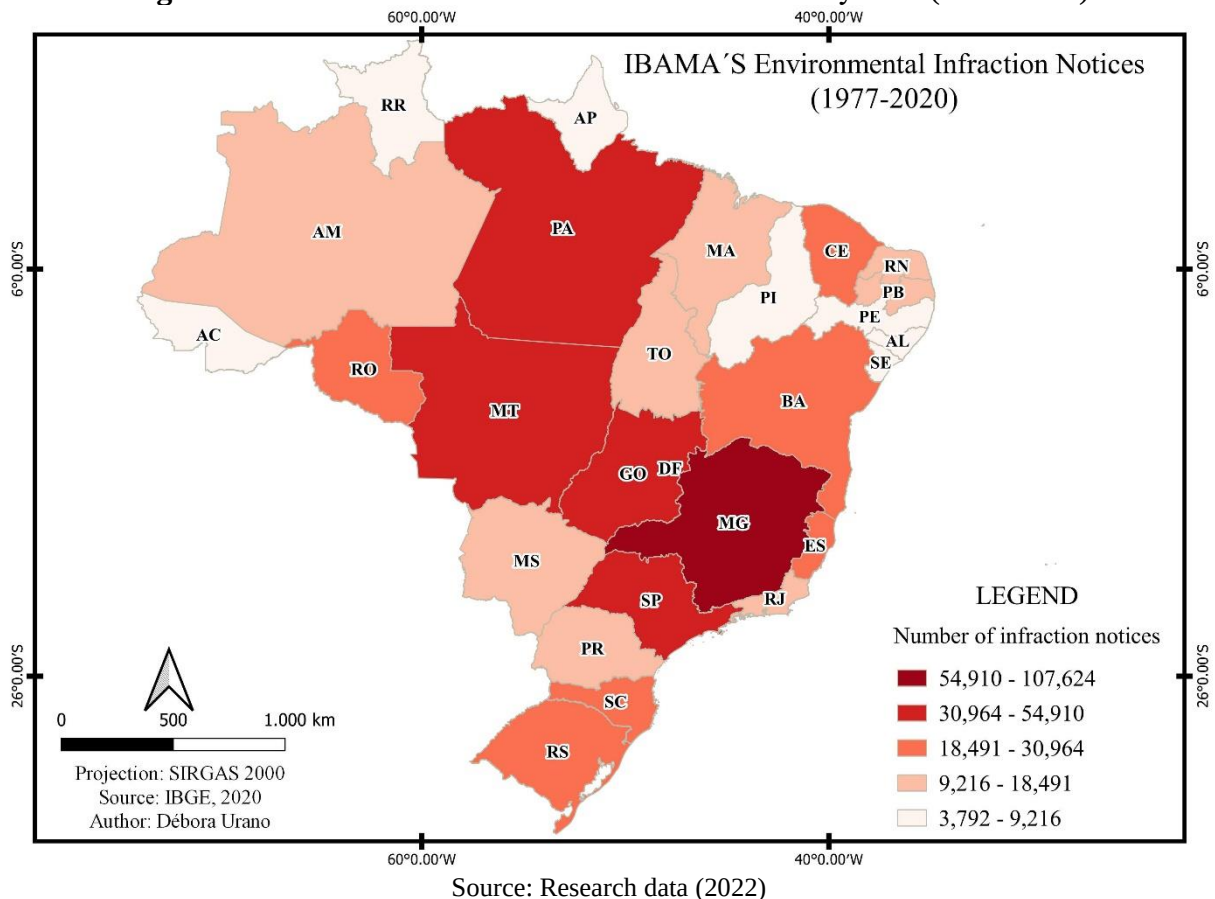
The next stage was to access the websites of the above mentioned institutions (*IBAMA*, *ICMBio*, *MPF*, *JF*) and search for online information on infraction notices, court lawsuits or sentences on environmental crimes. It is worth highlighting that Law 10,650/2003 obliges the agencies and institutions that are part of the *SISNAMA* to allow public access to existing data regarding environmental data. Consequently, *IBAMA*'s website (www.ibama.gov.br) gives access to different databases on different types of information concerning its work. As a result, there were five different datasets regarding environmental infraction notices, which were downloaded between 08/April/2020 and 04/June/2020. It is important to highlight that the infraction notices issued and judged by *IBAMA* refer to the administrative liability of the Brazilian environmental legislation. These infractions can also be judged under the civil and criminal liabilities. However, there was not a good online database available for the other institutions which enabled analysing the civil and criminal liabilities regarding the environment.

The dataset comprises the main attributes of environmental infraction notices issued in Brazil by *IBAMA* since 1977, and was used as the main information source for this analysis. It provided a set of 760,858 environmental infraction notices issued during the period between 1977 and 2020. From this total amount, 161,646 that did not indicate the city or even the state where the infraction notice was generated were excluded. Cases that did not indicate the issuing date or the dates were incorrect (for example, indicating that the infraction notices were issued

in 2049) were also excluded. The exclusions led to a total of 599,193 environmental infraction notices. Figure 5 shows the distribution of these infraction notices by State.

It can be observed that Minas Gerais (MG) is the State with the higher number of infraction notices (107,624) followed by Pará (PA) (54,910), and Mato Grosso (MT) (44,403).

Figure 5. Distribution of IBAMA's Infraction Notices by state (1977-2020)



Since there was no information on the economic activity of the offender in the dataset, a search using keywords related to the tourism industry was carried out through the 'offender' and 'description of the infraction' variables in order to identify companies and crimes that were related to tourism. After some adherence tests, the keywords chosen were: '*turismo*' (tourism), '*hotel*' (hotel), '*turístico*' (touristic), '*viagem*' (travel), '*hotelaria*' (hospitality), '*pousada*' (inn), '*resort*' and their variations. A filter comprising the period between the years 1998 and 2018 was applied. This period was chosen because 1998 was the year the *LCA* was promulgated, and 2018 was the year of Bolsonaro's election. Considering that this research did not extend until the end of Bolsonaro's government (2022), it was decided not to incorporate the period that covered part of his government administration. However, it is important that future studies regarding environmental infractions embracing this period be conducted.

Next, some of the cases were analysed to verify if the offenders' economic activity had a direct relation to tourism by looking at the National Register of Legal Entities (*Cadastro Nacional de Pessoa Jurídica – CNPJ*)⁵. In doing so, it was necessary to exclude some cases that did not have their legal registration number. Moreover, some cases were excluded for not having direct relation to the tourism industry, resulting in a dataset of 854 cases, which is equivalent to 0.14% of the total amount of infractions notices analysed.

The analysis was divided into 05 categories: a) Period of the offenses; b) Location of the offenses; c) Category of Infraction Notices; d) Offenders; and e) Fines. Each of these categories was explored and analysed using both the Microsoft Excel 365 and IBM SPSS Statistics 25.0 programs. The analysis was performed through descriptive statistics and graphs, as well as content analysis (Bardin, 2004) when analysing the description of infractions. A spatial analysis was also carried out using the QGIS 3.16.14 and GEODA programs for the 'Location' Category.

As previously presented, the environmental law enforcement framework in Brazil is very complex comprising bodies in the federal, state and municipality levels. Therefore, the State of Ceará (CE) was also chosen to incorporate the State secondary data on environmental infractions. Then, I visited the websites of the Ceará State Prosecutor's Office (*Ministério Público Estadual - MPCE*), Ceará State Justice, and Ceará State Superintendence of the Environment (*Superintendência Estadual do Meio Ambiente do Estado do Ceará – SEMACE*). The SEMACE website had online data regarding environmental infractions available. However, the available data was only from the year 2012. Therefore, the data analysis regarding the State of Ceará for both *IBAMA* and *SEMACE* was restricted to the period between 2012 and 2018. Thus, a total of 6,275 infraction notices were analysed in the *SEMACE* dataset, applying the same methodology of keyword search and verification through the National Register of Legal Entities (*Cadastro Nacional da Pessoa Jurídica - CNPJ*)⁵. After this process, 203 infraction notices were associated to tourism. After applying a time filter to the *IBAMA* dataset regarding Ceará State, a total of 40 infraction notices were identified. Another point to highlight is that the *SEMACE* data did not have the same information as the *IBAMA* data. Therefore, some categories had to be analysed in a different manner (i.e. infraction category and fines).

Next, a second step of the methodological process was performed to better understand the analysed data. This step consisted in semi-structured interviews with representatives of the

⁵ CNPJ is a database managed by the Brazilian Federal Revenue Office that comprises information on the registry of all legal entities.

public bodies and agencies which are part of law enforcement framework. Six institutions were contacted via email: Federal Police –Ceará Section (*PF*), Ceará State Police (*Polícia Civil do Ceará – PCCE*), Ceará Military Police (*Polícia Militar do Ceará – PMCE*), *IBAMA* - Ceará Section, *SEMACE*, and Ceará State Prosecutor’s Office (*Ministério Público do Ceará - MPCE*). An interview script was elaborated for each institution having similar questions that focused on three main points: work executed for each institution, progress and obstacles in the environmental law enforcement framework, and the relationship between environmental crimes and the tourism industry. These questions had the aim to better understand the environmental legislation and the environmental law enforcement system, making it possible to identify factors which make it difficult to battle environmental crimes by official institutions. Some questions regarding the analysis of the secondary data for *IBAMA* and *SEMACE* were included. *IBAMA* replied via email. *SEMACE* and *MPCE* were interviewed via virtual conference. *PF*, *PCCE* and *PMCE* did not respond to the interview request. The interviews were recorded to enable complete transcription. After the transcription, the collected data was systematized, categorized, and analysed according to an adaptation of the content analysis technique (Bardin, 2004). The intention of the interviews was not to do an analysis of the discourses of each institution, but to search for answers that might explain some of the results found in the bibliographic and secondary data research. The next section presents the results of this analysis.

4.6 RESULTS

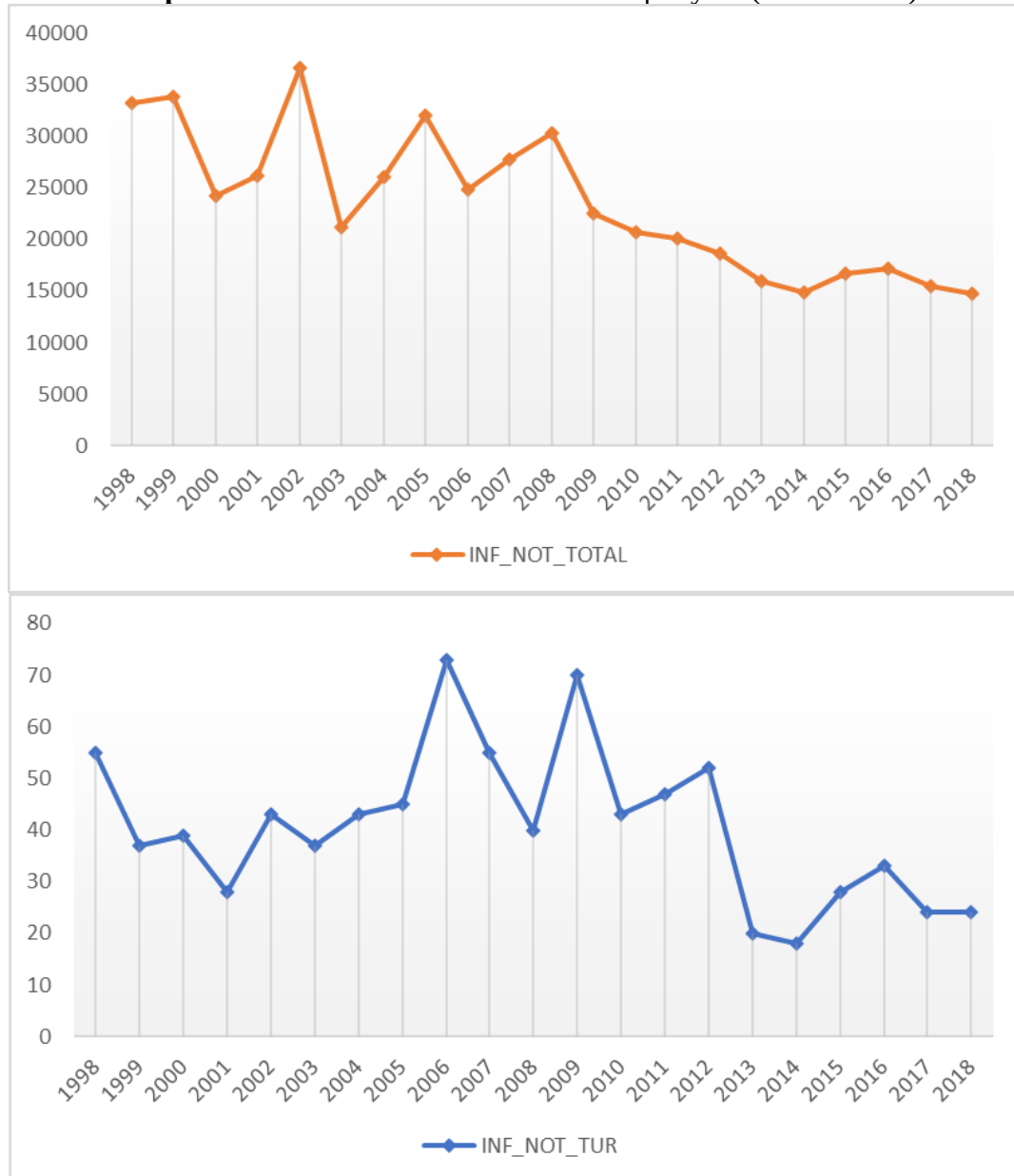
4.6.1 Brazil environmental infractions related to tourism

Graph 2 shows the distribution of the total of infractions notices issued by *IBAMA* by year, and the distribution of the infraction notices related to the tourism activity. As a result, 2002 was the year with the highest number of infraction notices ($n=36,629$), and a decreasing trend can be observed after 2008.

In addition, 2006 and 2009 are the years with the highest number of infractions (73 and 70, respectively). There was no evidence of a consistent increase or decrease over time. However, low numbers after 2012 can also be observed. It is important to highlight that this period (after 2012) can be seen as the new cycle of Brazilian environmental legislation, as mentioned before, which is characterized by a dismantling of the legal framework regarding environmental protection and the law enforcement agencies. However, it cannot be assumed that this is the reason for the lower number of infraction notices.

According to *IBAMA*, the variation in the number of environmental infractions is mainly related to the law enforcement structure in each State and throughout the years, including aspects such as logistical capacity (vehicles, vessel, etc.), the availability of federal environmental agents, the budget availability, the existence/functioning of environmental monitoring systems, among others.

Graph 2. Distribution of infraction notices per year (1998 - 2018)



*INF_NOT_TOTAL – Total number of infraction notices issued in the period. INF_NOT_TUR – Number of infraction notices related to the tourism activity in the period

Source: Research Data (2022)

Another aspect that influences the number of infractions related to the tourism industry is *IBAMA*'s responsibility for surveillance. Even though environmental protection by the

federative entities is a common responsibility as previously mentioned, LC 140/2011 establishes some rules for federative cooperation. In practice, although *IBAMA* may inspect any environmental infraction in any area, its structure will focus on the activities and areas which are *IBAMA*'s responsibility. For instance, enterprises and activities developed in more than two States or together with bordering countries, in federal conservation units, indigenous territories, federal rivers, and territorial sea will eventually experience more inspection actions from *IBAMA*.

The administrative region with the highest percentage of infraction notices was *Nordeste* (Northeast), and the region with the lowest percentage was *Sul* (South), as can be seen in Figure 6.

When analysing the data by State (Figure 7), Bahia (BA) and Rio de Janeiro (RJ) had the highest numbers of 99 and 94, respectively, as can be seen in Figure 7. They are followed by Ceará (CE) and Rio Grande do Norte (RN). The State of Acre (AC) had no environmental infraction notices issued in the period. According to *IBAMA*, in addition to the other factors mentioned above, several cultural and socioeconomic characteristics of the different regions can result in the difference in the amount of infraction notices.

Figure 6. Spatial distribution of tourism-related environmental infraction notices by administrative region

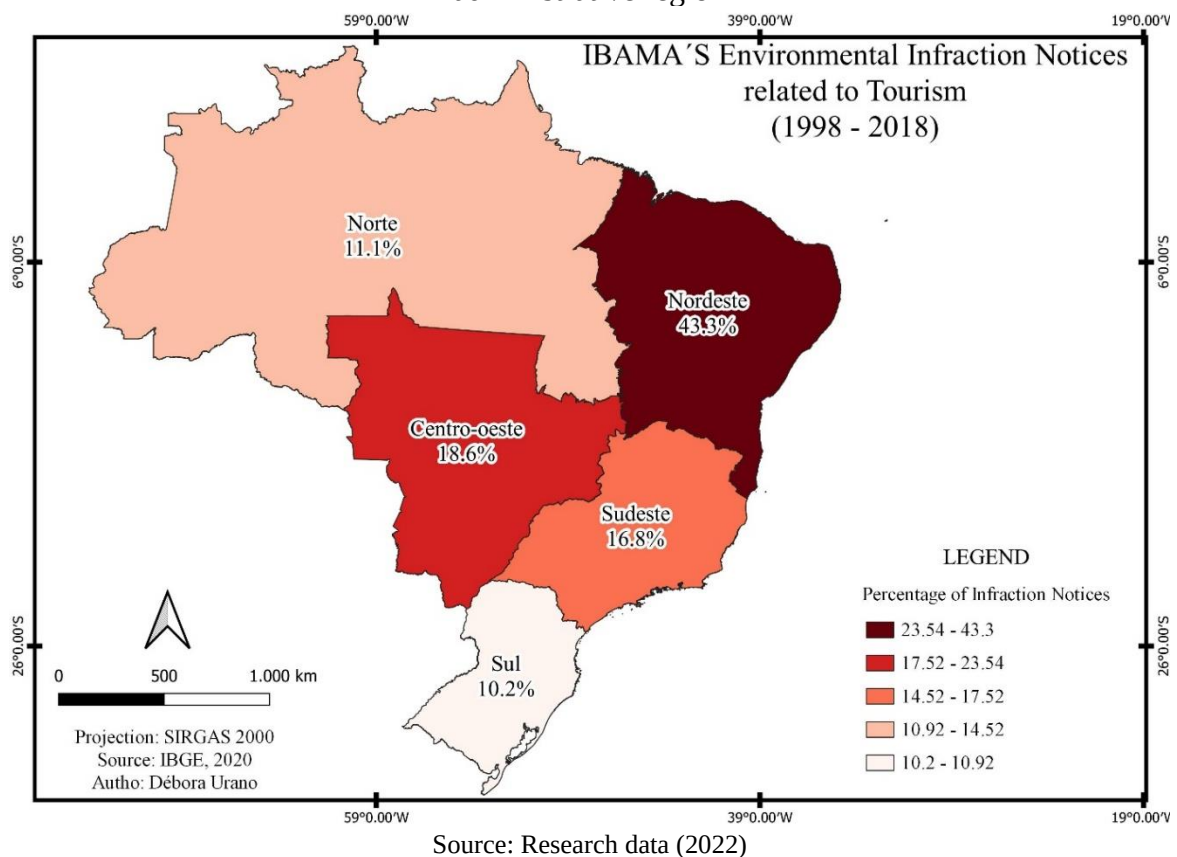
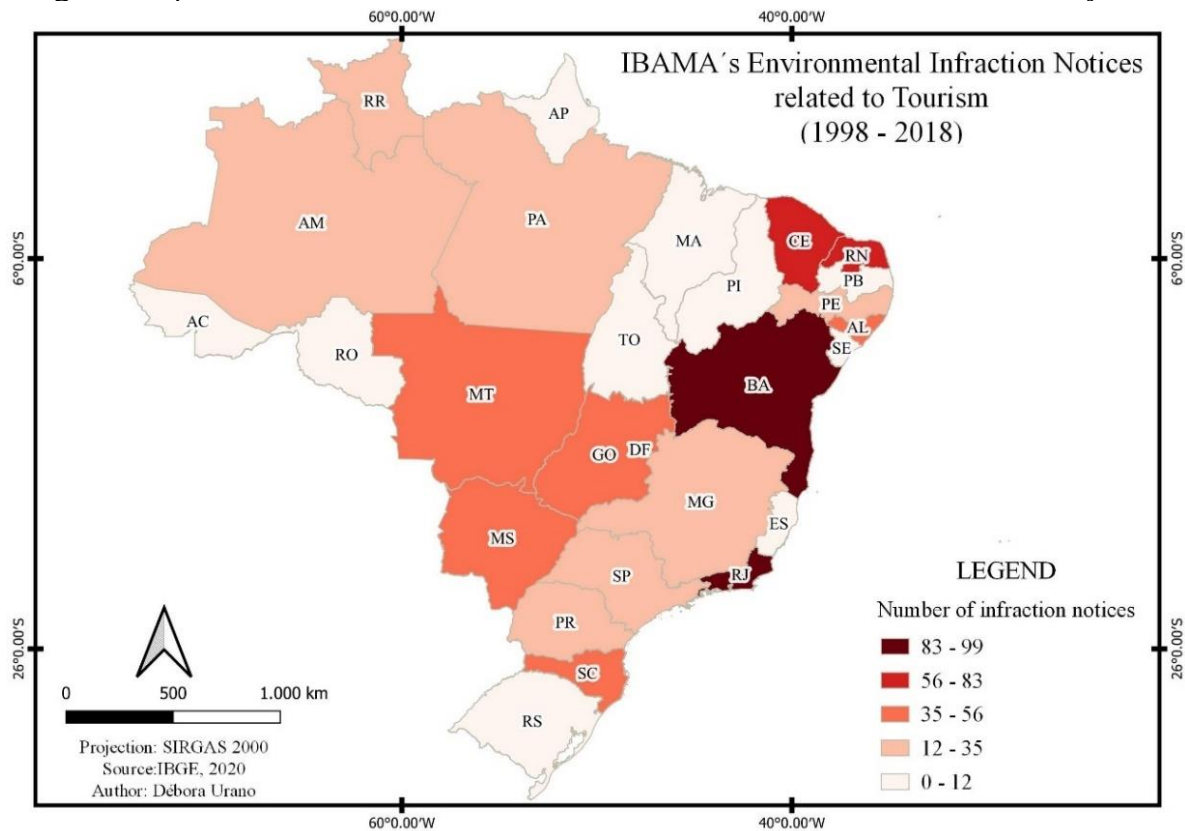


Figure 7. Spatial distribution of tourism-related environmental infraction notices by state



Source: Research Data (2022)

However, the number of environmental offences related to tourism does not seem to be related with a State being (or not) more associated to tourism activities. For instance, as can be seen in Table 6, São Paulo (SP) contributed to 49.85% of the tax revenue of the total tourism economy of the country and had 64.54% of the international arrivals. However, the percentage of environmental infractions related to tourism is low, only 2.2%.

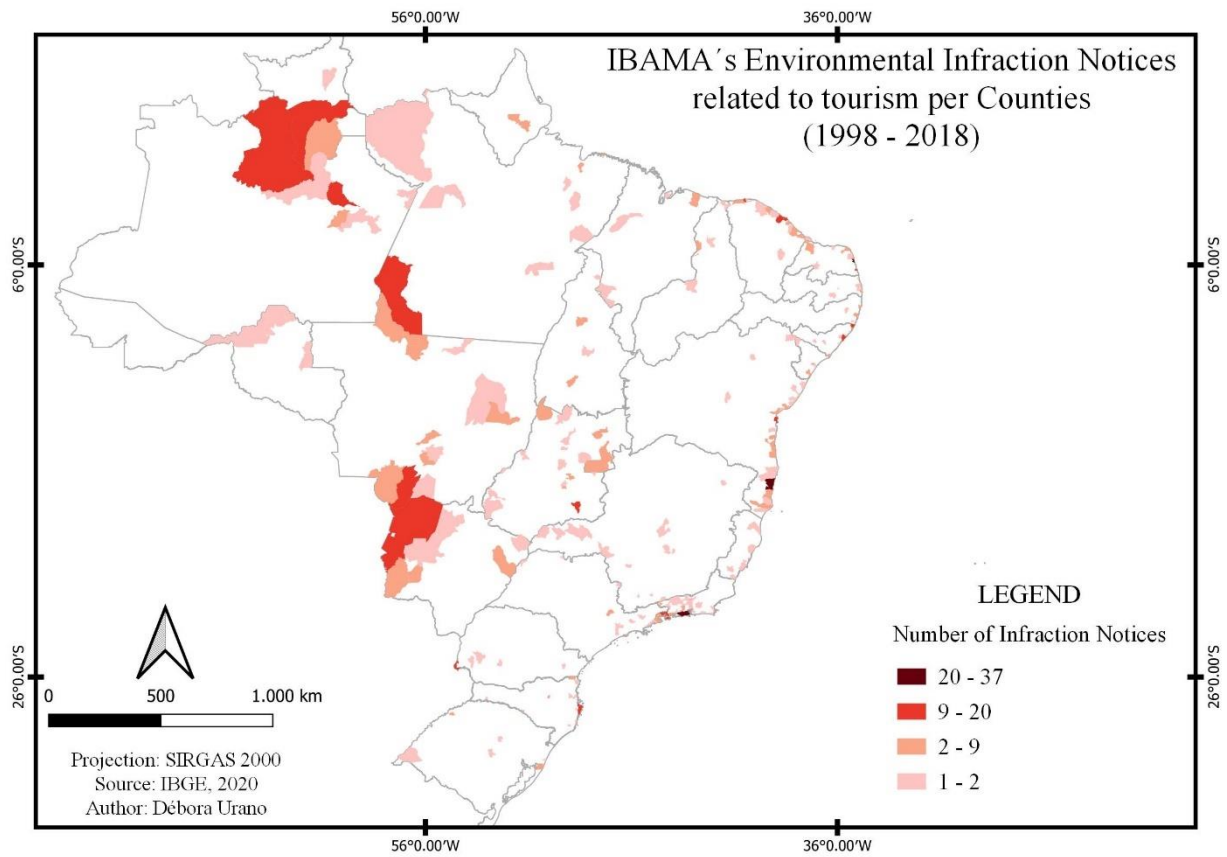
Another example is the State of Rio Grande do Norte (RN), which only contributes to 0.60% of the tourism tax revenue of the country, but it has a high percentage of infractions. Nonetheless, the state of Rio de Janeiro stands out because it is one of the main touristic destinations in Brazil and has a high percentage of infraction notices.

The spatial distribution per county was also analysed (Figure 8). Brazil has 5,570 counties, from which 2,694 are considered touristic. A total of 239 counties had tourism-related environmental infractions, from which 206 are touristic. Figure 5 shows the distribution of infraction notices per counties, in which a concentration of infractions on the Brazilian coast, and in Pantanal and Amazônia regions can be noticed. The capital city of Rio Grande do Norte (RN), Natal, has the highest number of infractions (37), followed by Porto Seguro (BA) (34), and Rio de Janeiro (RJ) (24), as can be seen in Table 7.

Table 6. Tax revenue of tourism economy by State in the year 2018⁶

STATE	TAX REVENUE BRL (TR)	TAX REVENUE USD (TR)	TR %	INTERNATIONAL ARRIVALS (IA)	IA %
Acre (AC)	R\$ 8,516,564.32	\$2,331,006.22	0.04%	0	0.00%
Alagoas (AL)	R\$ 108,056,553.77	\$29,575,365.06	0.56%	9,528	0.08%
Amazonas (AM)	R\$ 139,159,902.96	\$38,088,434.14	0.73%	67,362	0.57%
Amapá (AP)	R\$ 5,649,048.29	\$1,546,159.48	0.03%	0	0.00%
Bahia (BA)	R\$ 592,532,207.74	\$162,177,635.14	3.09%	223,961	1.90%
Ceará (CE)	R\$ 351,902,653.83	\$96,316,688.70	1.83%	191,870	1.63%
Distrito Federal (DF)	R\$ 383,599,042.83	\$104,992,074.35	2.00%	241,446	2.05%
Espírito Santo (ES)	R\$ 157,649,727.82	\$43,149,148.19	0.82%	0	0.00%
Goiás (GO)	R\$ 318,539,331.52	\$87,185,058.99	1.66%	0	0.00%
Maranhão (MA)	R\$ 67,078,319.91	\$18,359,513.88	0.35%	266	0.00%
Minas Gerais (MG)	R\$ 1,228,392,290.78	\$336,214,224.54	6.40%	287,035	2.44%
Mato Grosso do Sul (MS)	R\$ 69,896,196.71	\$19,130,774.23	0.36%	724	0.01%
Mato Grosso (MT)	R\$ 88,885,445.36	\$24,328,181.89	0.46%	0	0.00%
Pará (PA)	R\$ 150,753,113.00	\$41,261,526.44	0.79%	80,913	0.69%
Paraíba (PB)	R\$ 55,718,654.59	\$15,250,343.38	0.29%	2,292	0.02%
Pernambuco (PE)	R\$ 399,421,261.92	\$109,322,657.63	2.08%	277,251	2.35%
Piauí (PI)	R\$ 49,399,702.60	\$13,520,829.48	0.26%	0	0.00%
Paraná (PR)	R\$ 837,899,271.12	\$229,335,250.47	4.37%	97,127	0.82%
Rio de Janeiro (RJ)	R\$ 3,023,836,658.99	\$827,632,105.04	15.76%	2,238,570	19.01%
Rio Grande do Norte (RN)	R\$ 114,394,139.99	\$31,309,979.20	0.60%	44,784	0.38%
Rondônia (RO)	R\$ 27,563,557.75	\$7,544,218.78	0.14%	0	0.00%
Roraima (RR)	R\$ 12,434,519.54	\$3,403,360.94	0.06%	271	0.00%
Rio Grande do Sul (RS)	R\$ 765,032,935.14	\$209,391,541.26	3.99%	255,366	2.17%
Santa Catarina (SC)	R\$ 575,888,528.30	\$157,622,215.98	3.00%	158,362	1.34%
Sergipe (SE)	R\$ 56,333,880.55	\$15,418,732.36	0.29%	81	0.00%
São Paulo (SP)	R\$ 9,561,734,409.37	\$2,617,072,041.10	49.85%	7,601,258	64.54%
Tocantins (TO)	R\$ 32,268,188.22	\$8,831,888.61	0.17%	0	0.00%
Total	R\$ 19,182,536,106.92	\$5,250,310,955.47	100.00%	11,778,467	100.00%

Source: Research data based on information of MTUR (2020)^{7*}⁶ US dollar exchange rate is equivalent to the annual average of the year 2018 according to IPEADATA (2022).⁷ Both information sources are available on the 2020 *Anuário Estatístico de Turismo*. The data regarding Tax Revenue refers to the Federal tax revenue of the characteristic activities of tourism (*Atividades Característica do Turismo* – CAT – which include accommodation, food, land/water/air transport, rental transport, travel agency, culture, and leisure activities) and are available on the Brazilian Federal Revenue Office. The data regarding international arrivals refers to international arrivals by air travel, including regular and non-regular flights, and Brazilian residents and non-residents. The data source is the Federal Police of Brazil and the Ministry of Tourism. Despite the weakness of the data, it was used for containing data of all the States.

Figure 8: Spatial distribution of tourism-related environmental infraction notices per county

Source: Research data (2022)

Table 7. Top 10 counties according to number of tourism-related environmental infractions

MUN	UF	CLS	REG_TUR	N	%
Natal	RN	A	Polo Costa das Dunas	37	4.3
Porto Seguro	BA	A	Costa do Descobrimento	34	4.0
Rio de Janeiro	RJ	A	Metropolitana	24	2.8
Fortaleza	CE	A	Fortaleza	20	2.3
Maragogi	AL	A	Costa dos Corais	20	2.3
Corumbá	MS	B	Pantanal	20	2.3
Angra dos Reis	RJ	A	Costa Verde	19	2.2
Tibau do Sul	RN	A	Polo Costa das Dunas	16	1.9
Foz do Iguaçu	PR	A	Cataratas do Iguaçu e Caminhos ao Lago de Itaipu	15	1.8
Poconé	MT	B	Região Turística Pantanal Mato-Grossense	15	1.8
TOTAL				220	25.7

MUN – County; UF – State; CLS – Touristic classification; REG_TUR – Touristic region
Source: Research data (2022)

When analysing the number by touristic region (Table 8), the Pólo Costa das Dunas, where 2 main touristic destination of Rio Grande do Norte (Natal and Tibau do Sul) are located, is the touristic region with the highest number. The State of Ceará also stands out for having 4 touristic regions with the highest numbers of infractions.

Table 8. Top 10 touristic regions according to the number of infractions

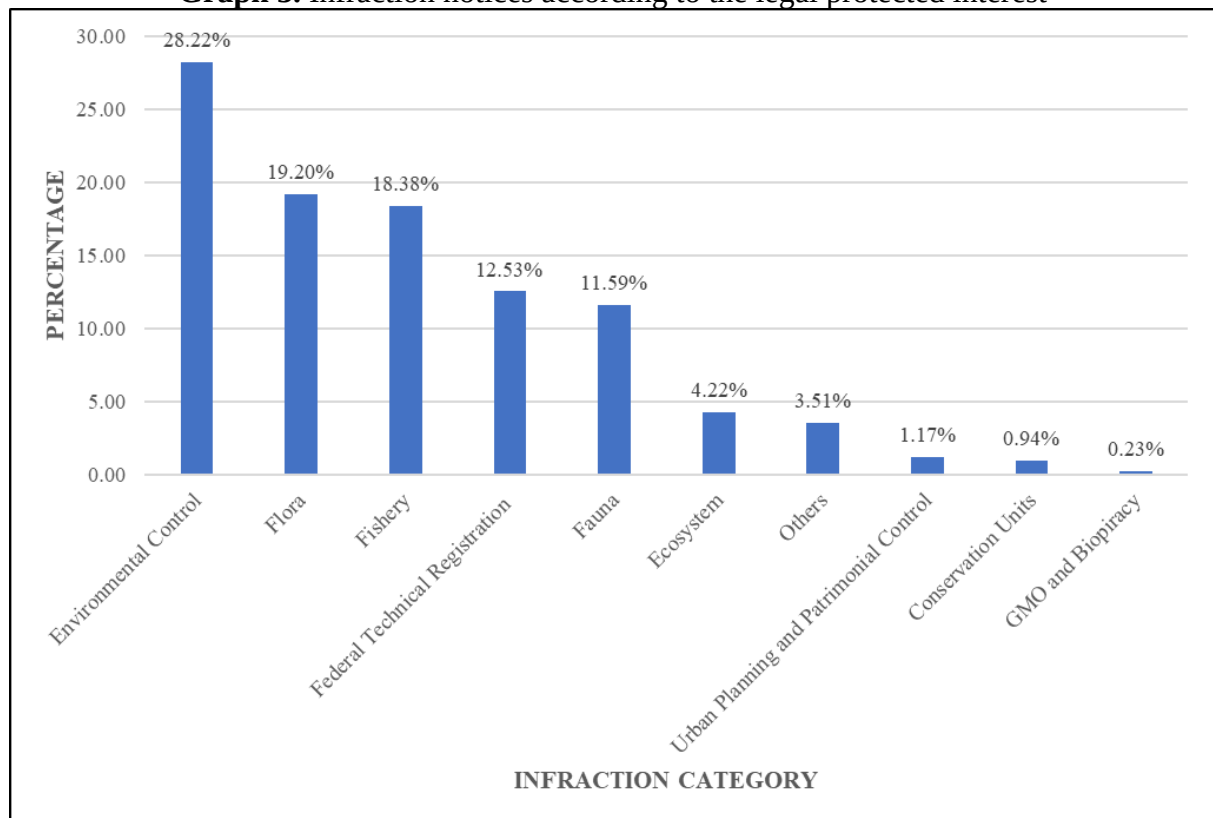
REG_TUR	UF	N	%
Polo Costa das Dunas	RN	68	8.0
Costa do Descobrimento	BA	36	4.2
Costa Verde	RJ	31	3.6
Costa dos Corais	AL	29	3.4
Grande Florianópolis	SC	24	2.8
Metropolitana	RJ	24	2.8
Pantanal	MS	24	2.8
Litoral Leste	CE	21	2.5
Litoral Oeste	CE	21	2.5
Fortaleza	CE	20	2.3
Litoral Extremo Oeste	CE	20	2.3

Source: Research data (2022)

According to the ‘legal protected interest’, the highest number of infractions are under the Environmental Control category (28.22%), followed by Flora (19.20%) and Fishery (18.38%) categories, as can be observed in Graph 3. A summary of the main infractions for each category can be observed in Table 9. It was observed that some infractions appeared in more than one category. Therefore, the infractions were classified in the category in which they appeared most. The main infractions related to the tourism industry are the infractions regarding ‘Environmental License’ for construction and operation of potentially polluting establishments in the ‘Environmental Control’ category. Most of these irregular constructions and operations occur in Permanent Preservation Areas (*Área de Proteção Permanente – APP*), but they also occur inside indigenous territories (*Territórios Indígenas – TI*), caves, and conservation units (*Unidades de Conservação – UCs*).

According to Law 12,651 of 2012, *APPs* are “protected areas, covered or not by native vegetation, with the environmental function of preserving water resources, the landscape, geological stability and biodiversity, facilitating the gene flow of fauna and flora, protecting the soil and ensuring the well-being of human populations”. For instance, areas located in dunes, riverbanks, lakesides, mountain tops, mangroves, places of refuge or breeding of migratory birds and endangered wildlife are considered *APPs*.

The main infractions under the Flora Category are deforestation and irregular trade of wood products. The transportation and storage of wood, firewood, coal, and other forest products or subproducts from forests of native species for commercial or industrial purposes must be informed to *IBAMA*. Failure to submit this information is considered an infraction.

Graph 3. Infraction notices according to the legal protected interest

Source: Research Data (2022)

Fishery infraction mainly refers to the irregular seafood trade, especially lobster and shrimp. However, *IBAMA* points out that irregular seafood trade is a result of predatory fishing. Fishing is prohibited or controlled in certain periods of the year for certain species. The closed season (*período de defeso*) is determined by *IBAMA* depending on the reproductive period of the species. For instance, the period between December 1st and May 31st is the closed season for lobster (*Panulirus argus* and *P. Laevicauda*). Thus, transportation, storage, processing, industrialization, and commercialization which does not come from the declared stock is prohibited during the closed season.

Companies that sell seafood in the closed season must declare their stocks to *IBAMA* and their stock must be compatible with the minimum catch sizes established in the legislation. Buyers must require an invoice and a copy of the stock declaration, which may be required during inspection actions. Failure to present these documents or having stored seafood not compatible with the minimum catch sizes established in the legislation are considered infractions.

In addition, *IBAMA* states that illegal (or predatory) fishing causes many social and environmental harms such as the destruction of marine species' habitat and reproduction sites, loss of fish stocks, risk of extinction of specimens due to overfishing, pollution of marine

environment, risk to fishermen health from the use of *marambaias*⁸ or compressors, and a decrease in fish production and family income.

Table 9. Summary of the main environmental infractions by Infraction Category

Infraction Category	Description of the infraction
Environmental Control	Environmental License
	Pollution
Flora	Deforestation
	Irregular trade of wood products
	Hinder natural vegetation regeneration
	Illegal mining of mineral resources
	Illegal fire
Fishery	Irregular seafood trade
	Illegal fishing
Federal Technical Registration	Fail to enrol in the CTF
	Fail to submit annual report
	Fail to meet legal requirements
	Breach of embargo
	Provide false information
	Hinder inspection action
Fauna	Illegal captivity of wildlife
	Irregular wildlife trade
	Irregular animal subproducts trade
	Animal abuse
	Illegal use of animal image
	Illegal hunting
	Illegal operation of Zoo
Ecosystem	Entering a protected area without authorization
	Non-compliance with the management plan

Source: Research Data (2022)

The Federal Technical Registry (*Cadastro Técnico Federal – CTF*) contains the register of individuals and legal entities that develop potentially polluting activities which use environmental resources at the national level. Resorts, farm hotels, historic hotels, theme parks, water theme parks, and hydromineral resorts with thermal springs or minerals are required to enrol in the *CTF*. They are considered of low pollution potential and low degree of use of natural

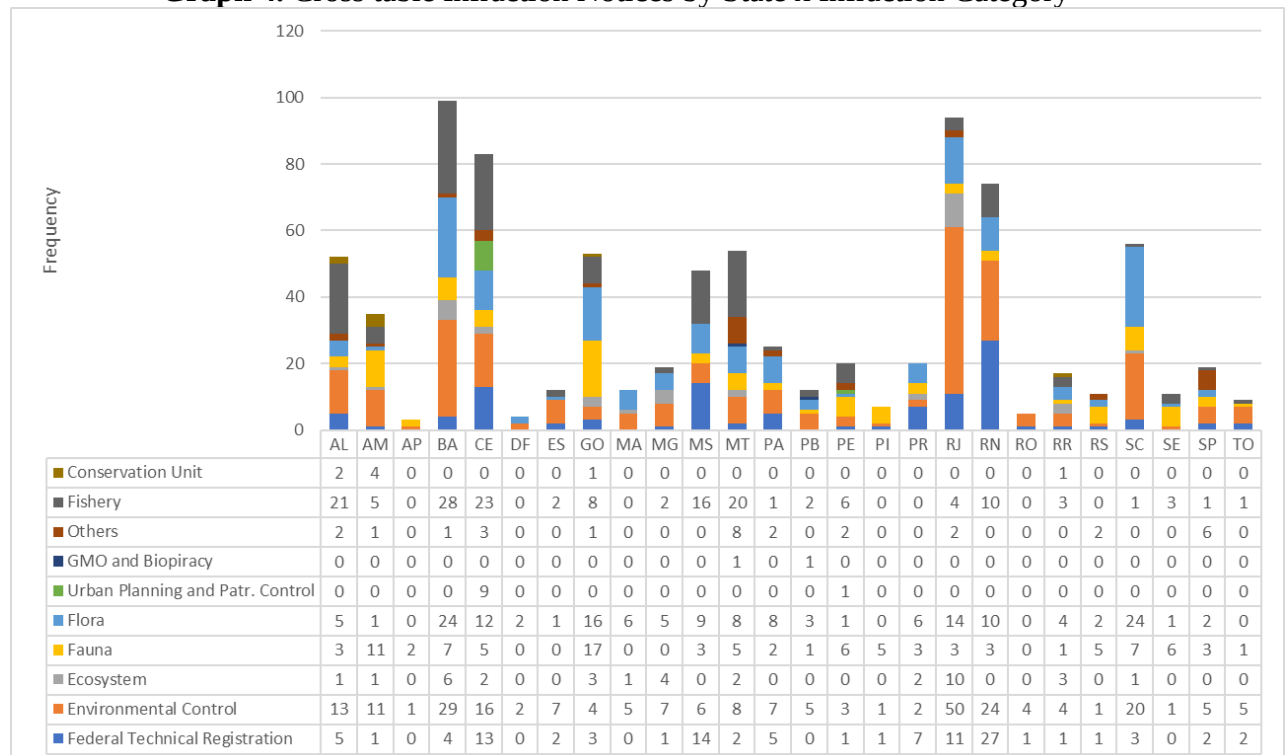
⁸ *Marambaia* is a fishing gear in which an old, dirty, and rusty barrel to transport toxic products such as oils and lubricants is used as an artificial niche to attract crustaceans.

resources according to Brazilian legislation (Law 6,938). Their polluting potential mainly refers to the generation of solid waste and energy source according to *IBAMA* normative instruction number 06 of 2014. The legal entities classified as potentially polluting are required to submit a report each year on the activities carried out in the previous year in order to collaborate with the control and inspection procedures. Failure to enrol in the *CTF* and to submit the annual report are the main environmental infractions in this category.

The main infractions in the Fauna Category involve the illegal captivity of wildlife and irregular wildlife or animal subproducts trade. Small numbers of animal abuse and illegal hunting occurrences were also observed.

Graph 4 shows the distribution of the categories by State. Flora infractions are most associated with the States of Santa Catarina (SC) and Bahia (BA), while Fishery infractions are most associated with the States of Ceará (CE), Bahia (BA), Alagoas (AL) in the Northeast of Brazil, and the States of Mato Grosso (MT) and Mato Grosso do Sul (MS) in the Midwest. Most of the States have ‘Environmental Control’ infractions.

Graph 4. Cross table Infraction Notices by State x Infraction Category



Source: Research Data (2022)

When analysing the offenders, it could be observed that the majority are associated to the hospitality sector including hotels, inns, eco resorts, farm hotels, apartment-hotels, among others. Other offenders identified were related to travel agencies, restaurants, theme parks, real

estate developments, road and water transport, and other recreation, leisure, and sport activities. It is common that the offenders practice more than one activity (for example hotel and restaurant, or travel agency and transport).

Table 10 shows the top nine fines (which comprise the fines above one million *reais*). They are worth almost R\$14 million (39.55%). None of these had been paid at the date of writing. While the more recent infractions (from 2012, 2016 and 2017) are still in administrative process, the older ones (before 2012) are filed in court, in debit or dismissed by negative prescription.

Table 10. Top nine tourism-related offenders according to the fine value*

OFF	INF DESC	YEAR	UF	VAL (BRL)	VAL (USD)	DEBT STATUS	STATUS
A1	Expand, within the Kayabi Indigenous Territory, a sport fishing tourism complex that uses an environmental resource, considered effective or potentially polluting, without a license	2017	PA	R\$ 4,510,500.00	\$1,413,329.57	Administrative Process	In operation
A2	Operate a Jungle lodge without a license	2009	AM	2,000,000.00	\$1,001,602.56	Filed in court	In operation
A3	Build a 22.2 m3 landfill in Pantanal and open a water course along the Cuiabá River without a license and without carrying out environmental impact studies	2003	MT	2,000,000.00	\$649,878.15	Dismissed because of negative prescription	In operation
A4	Deforestation of 1,213,717 hectares of native forest, on a rural property called Fazenda without authorization.	2016	MA	1,213,717.00	\$347,819.74	Administrative Process	Legal pendencies
A5	Install, expand and operate an allotment project over an area of 120.70 hectares consisting of APP (dunes, sandbanks and Atlantic forest), marina lands with parts within the Baleia Franca APA	2006	SC	1,000,000.00	\$459,706.71	In debt	In operation
A6	Build a retaining wall, without a license, located within the limits of the high tide at the Federal Conservation Unit-APA Costa dos Corais	2009	AL	1,000,000.00	\$500,801.28	Filed in court	In operation
A7	Operate a hotel enterprise in a APP (sandbank, mangroove and marginal water course of Maragogi River) without environmental license	2012	AL	1,000,000.00	\$511,770.73	Administrative Process	In operation
A8	Build, reform and operate a Sport Fishing Hotel using environmental resources located in the Kayabi indigenous territory without license.	2012	PA	1,000,000.00	\$511,770.73	Administrative Process	Out of operation
A9	Operate a fishing lodge using environmental resources without a license in Kayabi indigenous territory	2012	MT	1,000,000.00	\$511,770.73	Administrative Process	Out of operation

OFF - Offender (the names of the offenders were suppressed, and they were identified as A1 to A9); INF DESC - Infraction description; YEAR - year the infraction was notified by the authority; UF - State of the infraction; VAL(BRL) - Values in BRL; VAL (USD) - Values in USD; DEB STATUS - Status of the fine payment; STATUS - Status of the operation of the enterprise

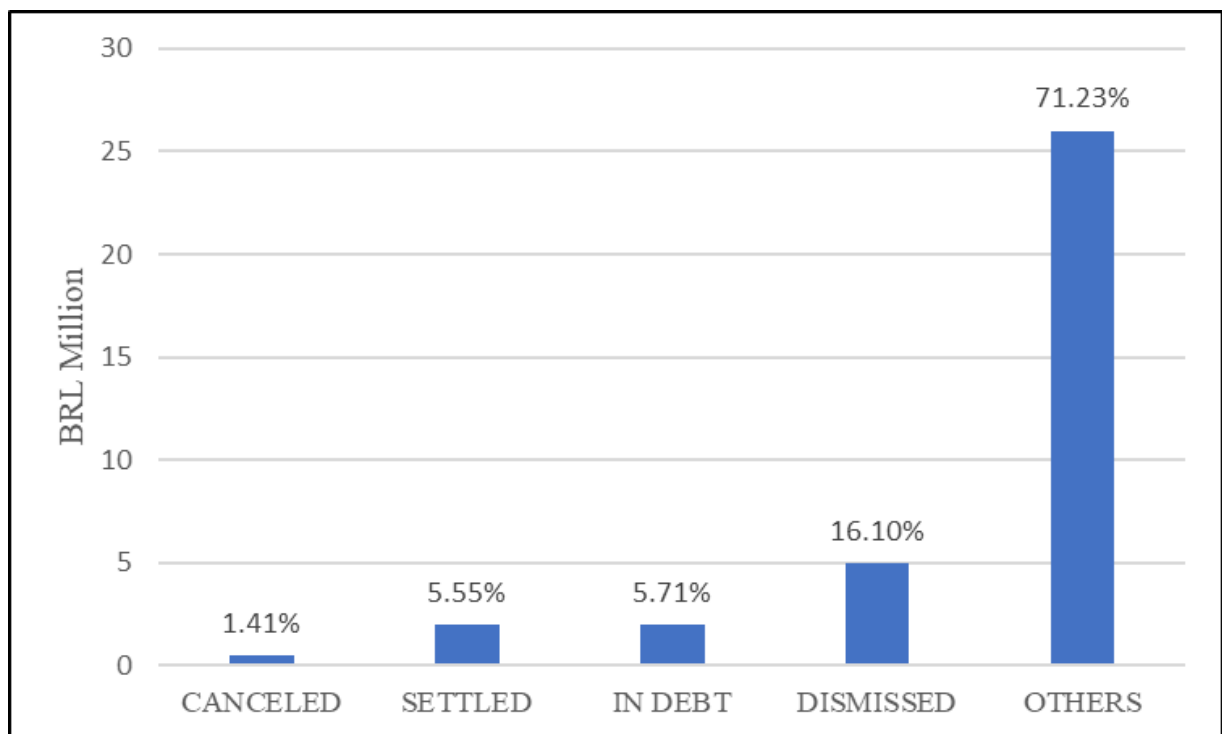
*Dollar exchange rate used was equivalent to the annual average of the year of the infraction according to IPEDATA (2022).

Source: Research data (2022)

It is also worth noting that 04 (offenders A1, A2, A8 and A9) of the top nine offenders are hotels, for which the main attraction is ‘Fishing Tourism’. They were fined more than once for different environmental infractions. Another point to be noticed is the incidence of irregular operation inside indigenous territory.

The total amount regarding the fines issued related to tourism was R\$37,228,218.56, which is equivalent to only 0.08% of the total amount of all fines issued in this period. From this total, only 5.55% was settled (see Graph 5). The value in debt refers only to the fines which were not paid and were registered in the Attorney General of the National Treasury (*Procuradoria Geral da Fazenda Nacional – PGFN*). The fines that were dismissed were due to environmental remedy, deferred defence, negative prescription, or court order. It is notable that there are only three infraction notices dismissed due to environmental remedy, all of which involve deforestation.

Graph 5. Status of the fines issued*



*The original dataset used for this research was crossed with another *IBAMA* dataset which refers to the status of fines

Source: Research data (2022)

It is important to highlight that the average time it takes for environmental cases to be dealt with by *IBAMA* exceeds five years (CGU, 2019). The Decree 6,514/2008 defines a negative prescription in cases where the infraction notice administrative procedures are

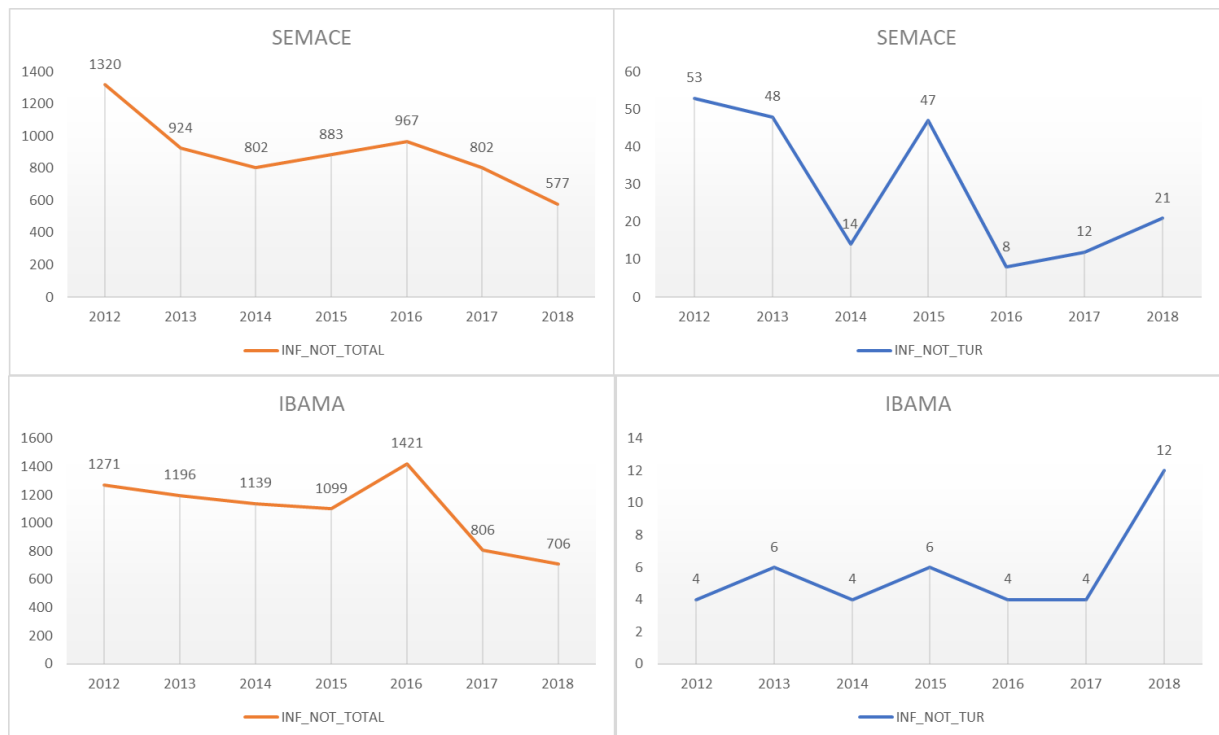
paralyzed for more than 3 years, pending judgment or dispatch. The most striking finding is that only a very small percentage of the fines issued by *IBAMA* are actually paid. From 2014 to 2018, an average of just 12.86% of infraction notices and 0.3% of the total amount issued were settled each year (*IBAMA*, 2016; *IBAMA*, 2019).

Therefore, the failure to collect fines is not exclusive to tourism-related activities. According to *IBAMA*, the collected fines are destined for the single account of the National Treasury, so their use is defined by the Union budget. There is no link between the amount collected and *IBAMA* or *MMA*.

4.6.2 Ceará State environmental infractions related to the tourism industry

The State of Ceará in Northeast Brazil comprises an area of 148,894.44 km². Its population according to the last census in 2010 was 8,452,381 inhabitants, with an estimated population of 9,132,078 inhabitants in 2019 (*IBGE*, 2020). The State is composed of 184 municipalities. In this section, both *IBAMA* and *SEMACE*'s data regarding environmental infraction notices were analysed. A total of 203 infraction notices from *SEMACE* and 40 infraction notices from *IBAMA* issued in the period between 2012 and 2018 were analysed. The distribution of *IBAMA* and *SEMACE* infraction notices over time is shown in Graph 06.

Graph 6. Distribution of Ceará's infraction notices by year

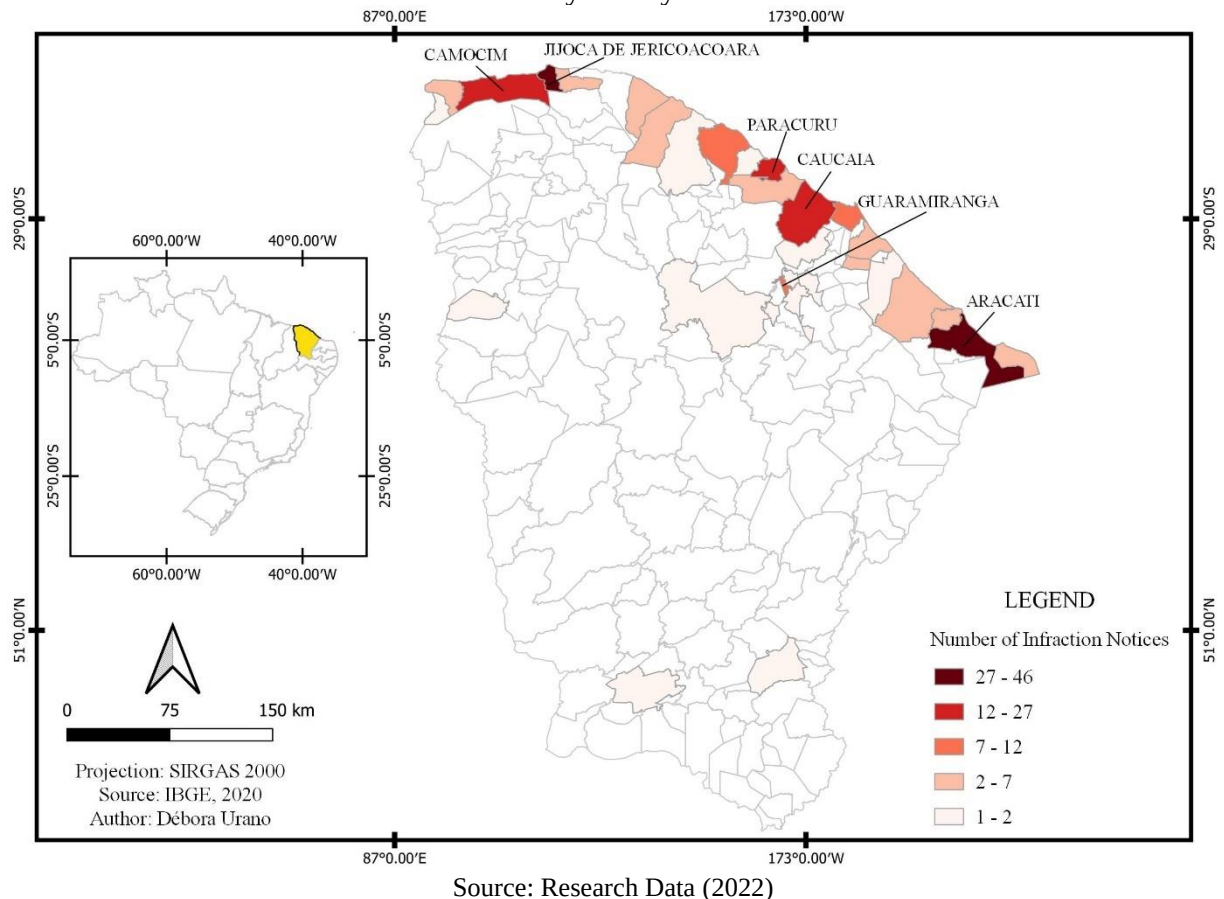


INF_NOT_TOTAL – Total number of environmental infraction notices issued in this period. INF_NOT_TUR – Number of infraction notices related to tourism

Source: Research data (2022)

Regarding the locations of the infractions, only 31 municipalities registered cases of environmental infractions related to the tourism industry. Figure 9 shows the distribution of infraction notices by municipalities. Adding the two databases together, Jijoca de Jericoacoara municipality had the highest number of infractions (46) issued during this period, followed by Aracati (45), Camocim (27), Paracuru (16) and Caucaia (16). The infractions are concentrated in the coast of Ceará where the main touristic destinations are located. Litoral Extremo Oeste, comprised of 7 municipalities, is the touristic region with the highest number (92), followed by Litoral Leste (73), and Litoral Oeste (52). One touristic region that concentrates some of the infractions and is not on the coast is Serra de Aratanha and Baturité, mainly the municipality of Guaramiranga (12).

Figure 9. Spatial distribution of the Ceará's tourism-related environmental infraction notices by county



IBAMA and *SEMACE* categorize the infractions in different types. As can be seen in Table 11, the main infraction refers to 'Environmental license', or rather the construction or operation of tourism enterprises without an environmental license. These constructions often occur in the beach and dunes. According to *SEMACE*, all general tourism enterprises in Ceará

must be licensed by the environmental agency. However, a lot of them which are of low polluting potential such as beach tents/kiosks⁹ (*barracas de praias*) and small inns are now being licensed by the local body. The license by adherence and commitment (*Licença por Adesão e Compromisso – LAC*) was recently created in the State of Ceará, which is a self-declaratory statement which decrees that the environmental agency can request information at any time. This enables monitoring and control of the enterprises.

Table 11. Summary of Ceará's main tourism-related environmental infractions

Infraction Category		Description of Infraction	N
SEMACE	Environmental License	Environmental license	146
	Others	Fail to meet legal requirements	35
		Hinder inspection action	2
		Fail to submit annual report	1
	Breach of Embargo	Breach of Embargo	12
	Pollution	Water Pollution	5
		Noise Pollution	
	Flora	Deforestation	2
Infraction Category		Description of Infraction	N
IBAMA	Fishery	Irregular seafood trade	13
	Federal Technical Registration	Fail to submit annual report	7
		Fail to enrol in the CTF	3
		Fail to meet legal requirements	1
	Others	Environmental License/Breach of Embargo	15
	Urban Planning and Pat Control		
	Environmental Control		
	GMO		
	Flora	Hinder natural vegetation regeneration	1

Source: Research Data (2022)

Table 12 presents the main offenders in the period according to the value of the fine. The main offenders correspond to a total of R\$1,768,780.00 in fines, which is equivalent to 58% of the total amount of fines related to tourism (R\$3,043,854.80).

SEMACE highlights the importance of issuing 'environmental license' infractions. Environmental inspection of the offense location does not happen very often. It is very rare that the inspectors have an information base that can support the field inspection and they only rely on the evidence they can observe during the visit to the field. This sometimes jeopardizes the

⁹ Beach tents are restaurants located on the sand of the beach, and are very common in Brazil.

inspection and requires technical capacity in different fields of environmental sciences. However, the environmental license process requires environmental studies which are sometimes simple, but other times are more complex, such as the Environmental Impact Studies/Environmental impact report (*Estudo de Impacto Ambiental/Relatório de Impacto Ambiental – EIA/RIMA*). These studies provide information which allows monitoring of the impacts to the environment which are essential to evidence the environmental crime. Therefore, when some activities are exempt from licensing, it makes inspection difficult as there will not be any information to control and monitor the economic activity.

Table 12. Main tourism-related environmental offenders in Ceará*

OFF	INF DESC	YEAR	LOC	VALUE (BRL)	VALUE (USD)	STATUS
B1	Operation of an inn without environmental license	2016	Jijoca de Jericoacoara (Jericoacoara Village)	R\$ 500,000.00	\$143,287.00	In operation
	Construction of an apartment building without the environmental license	2017		R\$ 250,000.00	\$78,335.53	
	Pollution of any nature in levels that might result in harms to the human health	2018		R\$ 100,000.00	\$27,370.26	
B2	Discharge domestic effluents from sewage treatment station in disagreement with the legal requirements.	2016	Caucaia (Cumbuco Beach)	R\$ 50,000.00	\$14,328.70	In operation
	Fail to present stock declaration of lobster in the closed season	2014		R\$ 25,600.00	\$10,880.19	
	Fail to submit annual report	2014		R\$ 6,000.00	\$2,550.04	
B3	Breach of embargo	2016	Caucaia	R\$ 180,000.00	\$51,583.32	In operation
	Breach of embargo	2013	(Cumbuco Beach)	R\$ 60,000.00	\$27,816.41	
B4	Construction of 08 chalets in dunes without authorization	2018	Camocim (Tatajuba Village)	R\$ 100,000.00	\$27,370.26	In operation
	Construction of a kitesurf school in the beach without authorization of the environmental body	2018		R\$ 100,000.00	\$27,370.26	
	Breach of embargo	2013		R\$ 70,000.00	\$32,452.48	
	Construction of a hotel without the environmental license	2013		R\$ 50,000.00	\$23,180.34	
B5	Construction of a hotel without an environmental license	2013	Jijoca de Jericoacoara (Jericoacoara Village)	R\$ 50,000.00	\$23,180.34	In operation
	Fail to present stock declaration of lobster in the closed season	2018		R\$ 2,180.00	\$596.67	
B6	Breach embargo	2018	Fortim (Pontal do Maceió)	R\$ 125,000.00	\$34,212.83	In operation
B7	Construction of a potentially polluting enterprise that uses an environmental resource in disagreement with the environmental license	2017	Guaramiranga	R\$ 100,000.00	\$31,334.21	In operation

OFF - Offender (the names of the offenders were suppressed, and they were identified as B1 to B7); INF DESC - Infraction description; YEAR - year the infraction was notified by the authority; LOC - County of the infraction; VAL(R\$) - Values in BRL; VAL (US\$) - Values in USD; STATUS - Status of the operation of the enterprise

* According to value of fines. As some offenders had more than one fine issued, the sum of all the fines was considered to rank them. It includes both *IBAMA* and *SEMACE* infractions. Dollar exchange rate used was equivalent to the annual average of the year of the infraction according to IPEDATA (2022).

Source: Research data (2022)

It can also be observed that it is common that the offenders commit more than one infraction. *SEMACE* data does not provide the status of the fine. However, *SEMACE* stated that the percentage of fines settled is very low. Historically, around 15% of the fines are settled. There is no loss for the offender in case of non-payment of the fine. If the offender does not pay, he or she will be enrolled in the Defaulters Registry of the State Public Treasury (*Cadastro de Inadimplentes da Fazenda Pública Estadual – CADINE*) debt, which imposes that the offenders are prohibited to: (I) participate in public bidding conducted in the scope of Ceará State Public Administration; (II) obtain a loan from a state financial institution; (III) obtain a tax debt clearance certificate and a tax compliance certificate, issued by the Treasury Department; (IV) receive conditional tax benefits or financial incentives sponsored by the State; (V) enjoy benefits sponsored by state development funds; and (VI) obtain Special Tax Regimes (Law no. 12411 DE 02/01/1995). However, individuals and companies enrolled in *CADINE* can still use *SEMACE*'s services such as getting environmental license. In addition, it is common that companies in debt with the government register another *CNPJ* to continue operating without restrictions. This was identified in some cases when analysing the offenders. Based on the results presented here, some points will be discussed in the next session.

4.7 DISCUSSION

The secondary data analysis showed some important patterns of tourism-related environmental crimes. For instance, it showed the non-compliance of tourism enterprises with environmental legislation. It also discovered how tourism relates to illegal fishery, not only through fishing tourism activities, but also through the illegal commercialization of fishery by the hospitality sector. Another point revealed is the illegal captivity of wildlife and animal abuse by the tourism sector. These findings require future studies which adopt other research techniques as the secondary data analysis was only able to show some patterns, but cannot go deeper into the processes, causes and consequences of these environmental crimes.

In addition, secondary data only gives a partial picture of the environmental crimes perpetrated since there are several structural problems which hinder the effectiveness of environmental law enforcement. In the Brazilian case, even though the *SISNAMA* structure was defined in 1981, not all municipalities currently have their local environmental body, or when they have it, there is not the necessary structure for licensing enterprises. Thus, the State and federal bodies are not able to cover law enforcement within the whole territory of Brazil in an effective manner. For example, *IBAMA*'s headquarters in Ceará started its activities in 1989

and *SEMACE* was created in December of 1987, starting its activities in 1988. However, from the 184 municipalities in Ceará, only 61 have an apt environmental body to license according to the State legislation¹⁰ (*SEMACE*, 2022). Moreover, even though some municipalities have the environmental body, they have no human resources to conduct the licensing process or the inspections. For instance, in the case of the municipality of Caucaia, the environmental body was created in 2005, but it was only recently organized with technical human resources to conduct environmental licensing. This is especially important for tourism which is considered of local polluting potential in most cases. Therefore, the responsibility for licensing and inspection is assigned to the municipalities. Without having a structured environmental department and technical capacity for licensing and inspection activities, this process is done with no rigor.

The lack of human resources was also cited for both *IBAMA* and *SEMACE* as the main obstacle for the exercise of the environmental inspection and an effective law enforcement. The number of public servants in each of the bodies is outdated, and there is a need for public selection. Another problem is the necessity for specialists in many areas of environmental science who can analyse the different situations found in the field. *IBAMA*'s public servants belong to the career of 'Environment Specialist'. Thus, the position of 'Environmental Inspector' in the federal sphere does not exist, but only the designation of Federal Environmental Agents who may be designated to conduct environmental inspection activities after participating in specific training. There are currently 28 'Federal Environmental Agents' at *IBAMA*'s headquarters in the State of Ceará. In the case of *SEMACE*, the public selection for 'Environmental Inspector' occurred only in 2009. Nowadays, there are 229 public servants, from which 51 are 'Environmental Inspectors' in exercise, but only 29 environmental inspectors are in the field conducting inspections. The remaining are working in management positions or are lent to other government institutions. The shortage of technical capacity is also true for other institutions that address crime against environment, but are not part of *SISNAMA*, like the Police Departments and the Prosecutor's office. For example, in the State of Ceará, *MPCE* does not have environmental specialists to conduct investigations and analysis, so it depends on the Centre of Expertise in Legal Engineering and Environment from the Forensic Expertise of the State of Ceará (*PEFOCE*).

¹⁰ See State Environmental Council (*Conselho Estadual de Meio Ambiente – COEMA*) Resolution number 07 from September 12th, 2019

In addition to the lack of human resources, the lack of logistical structure, equipment, and financial resources also hinder the inspection activity. Thus, it is important to highlight that the inspection procedures can occur in two manners: when there is a public report about an environmental crime; or when there is an intelligence operation of the environmental department. *SEMACE* states that the intelligence operations are very rare due to the lack of structure, and most of the inspections occur in order to attend public reporting. This fact might reflect on the spatial distribution of the infraction notices. For instance, normally areas within Ceará that comprise the coastline and mountains, as well as conservation units, will have a greater number of infraction notices issued because they have more reports from the resident community. In this context, society's environmental perception and knowledge is seminal to environmental law enforcement. This is also especially important to tourism, as these areas are often touristic areas.

Another point mentioned as an obstacle for effective environmental law enforcement by *IBAMA* is the lack of integration between public policies (for example, fishery or touristic management policies regarding promotion and registry are not integrated with environmental inspection policy). Instead of the different public sectors working together with the environmental department, they are often dissociated and have conflicts of interest.

This is observed in the tourism case. Tourism appears in the Brazilian Constitution of 1988 in its article 180 as a factor of social and economic development. Tourism gained strength in the Northeast of Brazil as a strategy for the economic development of the region and reduction of regional disparities around the 1980s (Fonseca, 2005; Araújo & Moura, 2007). This process was driven by foreign investment and large hotel chains, aiming at foreign exchange through an increase in international tourist flow. It was based on a neoliberal perspective that suppressed the autonomy and freedom of both the public power and local communities (Fonseca, 2005) causing various economic, social, and cultural transformations. The results presented in this study show that this spatial occupation along the Brazilian coast, especially in the Northeast, by tourism development has been occurring in non-compliance with the environmental legislation. Tourism enterprises are operating without environmental license or in disagreement with the one granted in protected areas. According to *IBAMA*, the lack of environmental license in the construction and operation of tourism enterprises leads to a disorderly occupation of protected areas and real estate speculation which may become a threat to the culture and livelihoods of traditional communities, and expel these communities from their habitats, generating incalculable conflicts of interest.

When companies are not in compliance with the environmental legislation, it makes it difficult to monitor the environmental impact of their activities. Environmental licensing is an important mechanism for monitoring the impacts of economic activities and to mediate the relationship between society and nature. In the case of tourism, it is visible that the government is failing to protect the environment in the conflict of interest between nature and economy. Tourism development in Brazil and in the rest of the world is still based on economic growth and increasing income and tourist flows (Sharpley, 2020). The environment departments do not have sufficient structure, personnel, or financial resources to inspect tourism-related activities. Most tourist destinations have been growing in fragile environmental areas in a disordered manner, profoundly affecting both the ecosystem and the native traditional communities, as these communities have their survival based on the local natural resources. While the economic benefits of tourism can be seen in the short term, the economic costs of the degradation of the environment will be perceived in the long run.

4.8 FINAL CONSIDERATIONS

This element of the study was an initial attempt to explore the relationship between environmental crimes and tourism. It aimed to identify the patterns of tourism-related environmental crimes in Brazil through collecting and analysing the official data available. It revealed that tourism-related environmental crimes are often connected to non-compliance with the environmental license for construction and operation, especially in permanent preservation areas and indigenous territories; deforestation; irregular fishery commercialization which relates to illegal fishing; and illegal captivity of wildlife.

However, it is noteworthy that the collection, analysis, and publication of reliable national statistical data on environmental crimes worldwide is considered a current deficit by *UNEP* (2018). Despite the strong and extensive legislation concerning the environment in the case of Brazil, as well as the global leadership position achieved and maintained for many years over environmental policies, the country does not have a compiled dataset on environmental crimes and still struggles to address this type of crime more effectively (Brito, Barreto, & Rothman, 2005; Drummond & Barros-Platau, 2006; Barreto, Araújo, & Brito, 2009; Freira, 2015; Schmitt, 2015). This struggle is even more complex in the case of tourism activities, because the polluting potential is considered of local impact in most cases. Hence, the municipalities are responsible for licensing and inspection, but a great number of municipalities are not structured to do so.

For that matter, although this study considers that official statistical data is an important starting point to understand and address the relationship between tourism and environmental crimes, it is important to stress that this kind of data does not give a complete view of environmental crimes, as the information available depends on many factors such as the attention the government gives to this matter, the public investments in environmental policies and law enforcement, human resources, structure, and financial resources, etc. Therefore, future research which incorporates other secondary data from other public federal institutions as well as institutions in the state and municipality levels is needed. In addition, field research within the communities is encouraged in order to capture the infractions which are not shown in the official data.

Another limitation of this study refers to the methodology applied to identify the environmental crimes related to tourism activity. As there is no information on the dataset about the economic activity of the offenders, a keyword search was conducted through the names of the offenders and the description of the infractions to try to identify those related to tourism. Although some of the cases that appeared in the keyword search were identified as not being related to tourism, a deeper analysis of all the cases was not possible. Considering the dataset used in this research, one suggestion is that the environmental bodies should review the information given on the infraction notices to check how to provide information that could be important for future statistical analysis, for instance, identifying the economic activity of the offender. Providing an overview of the environmental crimes by economic activity might provide useful information for each economic activity sector to work in cooperation with the environmental bodies to reduce environmental degradation. In addition, tourism is complex and involves many actors and activities; thus, it is difficult to identify all the crimes that are related to it, and this type of keyword search might have left out some offenders.

Despite the limitations, the research reveals some interesting points for future analysis. First, it shows how tourism enterprises are operating without environmental licenses, and how this tool is extremely important to monitor environmental harms. Several authors have stressed the difficulty of identifying and monitoring tourism-related environmental crimes (Holden, 2000; Butler, 2000; Buckley, 2011). In this sense, an adequate environmental license process could help public agents and researchers to address this issue. Second, it shows how fishing tourism in the Amazon Forest and Pantanal may occur without regulation of the environmental agencies and how this affects the natural environment, the indigenous population, and other traditional communities. Third, how the hospitality sector proceeds with the commercialization

of seafood and how this affects the biodiversity of fish and the traditional fishing communities in Brazil. And lastly, it shows how hotels in Brazil are misusing wildlife as a touristic attraction and the harms it causes to non-human animals.

One last point that needs to be addressed is how to put these environmental costs into the account of the tourism economic activity since the economic impacts are the most important factors of government narratives when developing tourism. Environmental damage also means economic costs for government and society (Nelleman, et al., 2016), and this needs to be considered when analysing the economic impacts of tourism.

5. TOURISM-RELATED ENVIRONMENTAL CRIME: A STUDY CASE OF VILA GALE BRASIL AS AN OFFENDER

5.1 INTRODUCTION

The previous chapter analysed the patterns of tourism-related environmental crimes in Brazil through the official data available. The results were able to show the patterns of environmental crimes and offenders, as well as to discuss the factors which hinder enforcing tourism-related environmental crimes. However, the analysis of secondary data, as discussed previously, has its limitation, and only gives a partial view of the problem. Thus, a broader perspective is needed in order to understand the processes that involve environmental crimes in a more profound manner. In this sense, after obtaining the results from the secondary data analysis which identified the main tourism-related offenders in the state of Ceará, one of the main offenders, Vila Galé Cumbuco Golf Complex, was chosen as a study case to examine the tourism-related environmental harming and victimization processes.

Vila Galé Cumbuco was chosen because it is a foreign group which has several hospitality facilities along the coast of Brazil, as well as in Portugal. Therefore, its practices in this particular case are likely to be reproduced in their other units. In addition, Vila Galé Cumbuco is located in one of the main traditional tourist destinations in Ceará, which has already been quite transformed by the development induced by tourism. But at the same time, it is located in part of an indigenous territory undergoing a demarcation process, which has led to constant environmental conflicts. In this sense, the case enables providing both the perceptions of a community already transformed by tourism development and a community which has not yet.

This chapter mainly focuses on the first topic of ‘cause, consequence and predominance’ of the proposed framework, approaching the crimes, the offenders, and the victims. But it also goes into the third topic of ‘meaning and media representation’, approaching resistance movements and media construction of environmental crime and offenders. It aims to answer the question: “how does the process of environmental harming and victimization of tourism-related environmental crimes occur?”. To approach this question, the discussion intended to understand the past and present processes related to tourism development in the study area, Cumbuco beach, located in the municipality of Caucaia, which led to environmental harm. It is worth noting that this chapter follows a more sociological perspective of environmental crimes

and sheds light on harms and conflicts regarding tourism and the environment. The theoretical discussion is based on the literature of state-corporate crime and green victimology.

In this sense, the results are first presented here through a theoretical review of aspects comprising state-corporate crime and green victimology. Next, the methodological steps of the research are described, and the results are evidenced through a presentation of the touristic development process of Cumbuco beach in Ceará State and the specific case of Vila Galé. Finally, the discussion and final considerations are presented.

5.2 STATE-CORPORATE ENVIRONMENTAL CRIME

Environmental offenses are very often perpetrated by powerful actors such as corporations, states or a conjunction of corporation and state (Brisman & South, 2018a). It is common that private corporations do not comply with environmental regulations, prioritizing profit instead of rules and damages incurred (Wolf, 2011). Governments play a contradictory role regarding environmental crimes. While they are an important actor in the remediation and mitigation of harmful activities to the environment, they are also sometimes an actor in producing environmental harm. However, beyond being a direct actor in perpetrating harm to the environment, government actions and omissions regarding corporate actors can also contribute to corporate environmental harm, which would lead to state-corporate crimes.

According to Kramer, Michalowski and Kauzlarich (2002, p. 263), state-corporate crime can be defined as “criminal acts that occur when one or more institutions of political governance pursue a goal in direct cooperation with one or more institutions of economic production and distribution”. The concept was introduced in 1990 by Kramer in a series of presentations trying to explain how corporations and governments intersect to produce social harm. The work on state-corporate crime was largely influenced by Richard Quinney’s vision of criminology that was concerned with the harmful organization and institutional practices resulting from economic and political stratification in advanced capitalism. However, the concept was more developed due to a case study on the Challenger space shuttle explosion in 1986, in which it became clear that the disaster was a consequence of the interaction between two organizations: The National Aeronautics and Space Administration (NASA), a government agency, and Morton Thiokol Inc., a private business. Although there were already several works on both corporate and state crime by that time, the fact that corporations and government agencies can act together to produce criminal acts had not yet been mentioned (Kramer, Michalowski, & Kauzlarich, 2002).

According to Kramer, Michalowski and Kauzlarich (2002), state-corporate crime is a useful term as it shows that deviant organizational outcomes are the product of the relationship between different institutions; moreover, this relational characteristic enables focusing on horizontal relationships between economic and political institutions with powerful potential to cause social harm, and also sheds light into the vertical relationships between the individual, the institutional and the political-economic level of organizational action. State-corporate crime can be state-initiated or state-facilitated. State-initiated crime occurs when corporations are employed by the government and engage in organizational deviance with the approval or the direction of the government; while state-facilitated corporate crime occurs when government fail to restrain deviant business activities because they either have shared goals or because of the direct collusion between government and corporations

The creation of the concept in 1990 influenced a number of empirical and theoretical studies in the following years, and it is a useful lens to understand many environmental crimes. However, as Bradshaw (2014) states, albeit state-corporate actions are usually analysed in studying environmental harms, they are rarely identified as state-corporate crime, and more studies intersecting state-corporate crime and green criminology are needed. For the author, “the concept of state-corporate environmental crimes recognizes the fact that many environmental crimes are often the result of state and corporate interactions, rather than just one or the other” (Bradshaw, 2014, p. 167), thus it is imperative that more research focuses on how and by what means state and corporations work together to produce environmental crimes.

Nevertheless, more research on the topic has recently been conducted. For example, Bradshaw (2014) examined how the American government and British Petroleum (BP) worked together to conceal the environmental harm in the 2010 Gulf of Mexico oil spill. The author argues that the response for the oil spill can be characterized as a state-facilitated corporate cover-up of an environmental crime. The author showed that the US federal government worked as co-combatants with BP; first, to prevent the oil to reach the shoreline using hazardous chemical dispersants in an attempt to hide the amount of oil visible in the surface and to the public eye. Second, when the oil reached the shoreline despite the use of the dispersants, they implemented a media blackout. Access to the clean-up operations, beaches and airspace were blocked, and journalists and citizens were prohibited to document the devastating effects of the spill, which worked to discourage social control of deviance. In this sense, Bradshaw highlights the importance of the participation of society in providing social control on cases of state-corporate deviance. The idea is also corroborated by Kramer, Michalowski and Kauzlarich

(2002), who state that real social control must grow from social movements, grass-roots activities, an aggressive media, and open and democratic participation in the political process.

Another case study by Izarali (2015) showed the role of state, Shell and other corporate entities in producing human and environmental harms as a consequence of gas flaring in the Niger Delta. For the author, the underlying thread of state corporate crime is the idea that “the state has the duty to safeguard the public’s interest from significant harm” (Izarali, 2015, p. 15). Therefore, when there is involvement by the government in producing harm, whether in a direct action or through omission, the concept of state-corporate can be invoked. In the case of the gas flaring in the Niger Delta, the author showed that the state failed to enforce legislative measures to resolve the problem and interfered with judicial process in the interest of Shell. Additionally, the state facilitated the company’s production of harms by not enforcing any of the court orders to end gas flaring and issued fines that were too small, and therefore the harm was continued instead of addressing the problems. Furthermore, although there is a great amount of scientific evidence of a direct link between the gas flaring and harms such as respiratory ailments, birth defects, marine pollution, damage to agriculture and contamination of soil and water, the state facilitated gas flaring over the years to secure very harmful for-profit activities and its revenue, and they also pursued to suppress public discontent through aggressive efforts (Izarali, 2015).

Moreover, three studies cases in Latin America (the mining companies AngloGold Ashanti and Gran Colombia Gold in Colombia and the case of the Belo Monte hydroelectric dam in Brazil) were used by Ebus and Kuijpers (2015) to demonstrate how the mutually beneficial relations between a small elite of states and corporations facilitate corporate access to natural resources, causing several environmental harms, displacing groups of people and generating conflict and violence (Ebus & Kuijpers, 2015). In the words of the authors:

In theory, governments are expected to regulate and control corporate actors, holding them accountable for harmful activities, while ensuring and protecting its citizens’ human rights, the nation’s well-being, and the health and future of its environment and natural resources (...) But in practice, state actors often fail to do so, as the overlapping interests of states and corporations are often exploited to create mutually beneficial relationships that seem to benefit an elite group of corporate and state actors and rely on crimes, harms to people and nature, and land grabbing (Ebus & Kuijpers, 2015, p. 144)

In this process, the narrative of local and national economic development is used to ignore or justify the harms and crimes. According to the authors, in the study cases presented, States ignored the violations, failed to enforce the law, created lax licensing procedures, or sidestepped onerous ones, and gave benefits to the corporations through illegally transferred

titles, support of violent State forces, and contracts or laws which benefit private actors. In addition, for the authors, Corporate Social Responsibility (CSR) was used to promote the image of the harmful projects, being a capitalist tool to increase profit.

Regarding the excuse of economic development as a justification of environmental harms, Ruggiero and South (2013b) highlight that the hegemonic discourses around growth and freedom have exacerbated the destructive potential of corporations. According to the authors, neoliberal doctrines contradict their very own axioms that “the full costs of transactions must be borne by the involved parties” (Ruggiero & South, 2013b, p. 13). For them, humans and ecosystems are, in fact, those which bear a significant part of the price of many economic activities. In this sense, the authors criticize the dominance of the Gross Domestic Product (GDP) model as a measurement of economic success, because it does not capture costs to the environment, nor does it assess growth sustainability. While environmental degradation is not measured as a cost within the GDP and companies are not charged for the harms which are consequence of their activities, they indirectly receive state subsidies, favourable tax treatment and access to resources at below fair market prices.

The concept of state-corporate crime is used here to shed light on the processes that lead to tourism-related environmental offenses. Moreover, green victimology is also used to comprehend how the state-corporate crime victimization occur. Thus, green victimology is the topic of the next section.

5.3 GREEN VICTIMOLOGY

The topic of environmental victimization has been poorly discussed in Victimology research (Williams, 1996a; Skinnider, 2011; Spencer & Fitzgerald, 2013; Hall, 2014; Johnson, 2017). Williams (1996a) was one of the first scholars to advocate for an environmental perspective in Victimology. For this author, the environmental justice approach had an important role until then in making human responsibility for environmental changes visible, mobilizing action, and collecting data, but further perspectives needed to be developed. He then proposes an Environmental Victimology which would fit within the Radical Victimology branch and would be “concerned with human rights, abuses of power, and human suffering irrespective of whether the circumstances are within the ambit of law” (Williams, 1996a, p. 18). In his paper he defined environmental victims as:

those of the past, present or future generations who are injured as a consequence of change to the chemical, physical, microbiological, or psychosocial environment,

brought about by the deliberate or reckless individual or collective human act or omission (Williams, 1996a, p. 21)

In this definition, Williams excludes the victims of natural disaster such as tornados and earthquakes (which he names ‘environmental causalities’) and presents environmental victims as those who suffer from the consequences of deliberate or reckless human acts or omissions. He also presents an intergenerational responsibility with the victims, as crimes to the environment can take time to be perpetuated. Furthermore, he makes an effort to define what environment is, stating that it comprises four components (chemical, physical, microbiological and psychosocial).

Following this perspective, environmental crimes has often been described as victimless since it is hard to identify the victims. For Skinnider (2011), this description is due to an anthropocentric understanding of the problem. The anthropocentric view has also been a critique of Williams’s definition. According to Spencer and Fitzgerald (2013), the definition left the position of non-human animals unclear, and the concept of the environment as a victim seems untenable. For the authors, “the exclusion of non-human animals and the biosphere from this definition leaves anthropocentrism unchallenged” (Spencer & Fitzgerald, 2013, p. 220) and this allows companies to continue exposing them to harm without facing the consequences of their actions or omissions. In addition, as the authors states, ecosystems, non-human animals, and human animals cannot be detached.

In this sense, victims of environmental crimes challenge the traditional view of victims of crimes because it involves non-conventional victims such as non-human animals, the environment, communities, and future generations (Skinnider, 2011). This specificity of environmental victims hampers identifying the scope of victimization. For instance, when the victim is non-human animals or the environment, it is difficult to capture them in a victimization survey. Moreover, many times the harms are not easily observed and might need constant monitoring to be detected.

Even when considering human-animal victims, they are usually not included in victimologist research, and more research is needed to understand these types of victims and how the process of environmental victimization differs from other types of victimization. Nevertheless, through a literature review, Skinnider (2011) identified some common characteristics regarding victims of environmental crimes. First, victims are not always aware of the fact that they have been victimized, and sometimes, even when becoming aware of the harm, they do not consider themselves as ‘victims’ and do not report the crime to official

agencies. Second, in many cases the victimization is often delayed, with the victims only becoming aware that they have been victimized much later after the crime was committed, as sometimes the harms of environmental crimes can take years to manifest. Third, victims are not sure about who victimized them or who exactly is responsible; sometimes it becomes very difficult to prove the causal link. Fourth, the victimization is often serious because numerous victims are affected by the crime, and not because any single individual victim was seriously affected. Environmental victims are often victimized collectively. It is not only one person who is injured, but normally the community living in the surroundings of the offense, or even a whole society as in cases of air pollution and climate change. Finally, a fifth characteristic is that victimization can often include repeat offences and the harms caused are sometimes accumulated over time.

All of these characteristics have important implications on identifying the scope of environmental victimization. Many victim surveys fail in collecting data about victims who are unaware they are victims, and crimes in which there is a diffusion and multiplicity of victims such as the case of environmental victims (Davies, Francis, & Jupp, 1999). In addition, these specificities also complicate the victim's processes of seeking for assistance, support, or redress.

Beyond having unconventional victims and possessing distinct characteristics which hinder identifying the crimes, the offenders, and the victims, environmental crimes may also affect both ecosystems and non-human animals, as well as human-animals in a wide range of health, economic, social, and cultural impacts (Hall, 2011); and these impacts are never isolated. For instance, Spencer and Fitzgerald (Spencer & Fitzgerald, 2013) analysed the 2010 BP oil spill in the Gulf of Mexico through Guatarri's three ecologies (social, mental, and environmental) and identified different ways in which the victims were impacted. Within the social ecology, the authors demonstrated that the human victims were not only affected economically, but also culturally. After the oil spill, more than 12,000 jobs were at risk in Louisiana, 30% of the Gulf of Mexico was closed to fishermen by Federal officials, some restaurants began rejecting all Gulf-coast seafood, and many coastal cities whose economy was based on tourism had significant drops in reservations and loss of revenue. In this sense, many locals could have been forced to move to seek employment. In addition, within environmental ecology, although the exact degree of the devastation may never be known, there is evidence of the water quality being compromised, and the death of a number of species such as fish, turtles and dolphins were linked to the oil spill. Furthermore, regarding mental ecology, the

authors argue that BP continued the victimization even after the initial explosion and oil spill by their attempts to market itself as a company which cares about the environment and people's well-being through an intensive campaign to influence scientific research on the effects of the spill.

This last impact brings up the issue of re-victimization which is another important point in cases of environmental victimization. As it was previously argued, many environmental crimes are committed by powerful agents. Therefore, there is usually a power imbalance between the victimizer and the victim which can hinder access to and participation in the justice process (Skinnider, 2011). Moreover, it is not unusual that the fight against environmental crimes leads to attempts by the offenders to silence many environmental defenders with tactics which might include death threats, surveillance, sexual violence, criminalisation, and murder (Global Witness, 2021). Many environmentalists have been persecuted, indicted, or killed. The NGO Global Witness (2021) reported that 227 land and environmental defenders were murdered in 2020. Colombia (65), Mexico (30), Philippines (29), Brazil (20) and Honduras (17) were the countries with the highest number of documented killings. According to the report, 2020 was the most dangerous year for people who defend the environment, and still this data is certainly underestimated (Global Witness, 2021).

This attempt to silence reports and evidence of environmental harm also extends to scholars and researchers. For example, Pinto (2014) sheds light on how representatives of economic interest actively work to inhibit research development which relates their companies' activities with environmental harm in Brazil. The author demonstrated that companies use different mechanisms to intimidate researchers, which include legal actions such as prosecuting researchers for moral damage to the image of the company or the owner; and extra-legal actions like demoralization of researchers through the media or class organizations, veiled personal persecution or threats in the work environment.

Considering all the above, it is important to make the 'invisible' visible (Davies, Francis, & Jupp, 1999) and give voice to environmental victims. In the case of this study, to shed light on the process of tourism-related environmental crimes, which will be the aim of the next sections.

5.4 METHODOLOGY

This part of the research comprises a study case of a tourism-related environmental offender located in one of the main tourist destinations in the state of Ceará, Brazil. The offender

was chosen after analysing the secondary data regarding *IBAMA*'s and *SEMACE*'s environmental infraction notices which identified that this specific offender was one of the main tourism-related offenders in number of infractions and fine value in the analysed period (See Table 8 in the previous chapter). The chosen offender was Vila Galé Cumbuco Golf Complex, located in Cumbuco, a coastal locality in the municipality of Caucaia (Figure 10).

The research approach of the study case is qualitative and data collection was conducted through five main techniques: bibliographic research, interviews, direct observation, documentary research and social media tracking.

Field research was conducted between July/2021 and May/2022. Semi-structured interviews were conducted with representatives of public bodies and agencies related to environmental issues during this period. Four institutions were contacted via email: Ceará State Environmental Superintendence (*SEMACE*), Environmental Institute of Caucaia (*Instituto Ambiental de Caucaia - IMAC*), Ceará State Prosecutor's Office (*MPCE*), and the Municipal Secretary of Tourism and Culture of Caucaia (*Secretaria Municipal de Turismo e Cultural de Caucaia – SECULT*). Due to the SARS-CoV-2 (Covid-19) pandemic, the public bodies were contacted by email. *SEMACE*, *MPCE* and *IMAC* replied to my emails, and they were interviewed via virtual conference using the ZOOM platform. *SECULT* did not respond to the email. A question about the Vila Galé case was included for *SEMACE* and *MPCE* during the interview.

The enrolment process of other participants not related to the public power was conducted using two techniques in the interviews: a snowball process and social media tracking. The first technique was conducted during visits to Cumbuco. The first visits aimed to recognise the area and to approach and make informal conversation with residents. During these visits, I contacted the initial potential participants and they would introduce or recommend other potential participants. Social media tracking was conducted through following Instagram profiles of some social movements, NGOS, tourism enterprises and informal leaders related to the environmental theme in the region of Caucaia and the capital city of Fortaleza. This process was essential to not only identify other potential participants, but also to collect data on some current environmental crimes, harms, and conflicts in the study area.

Non-directive interviews were conducted with these other participants. A guideline script was developed for the interview with only 3 broad topics which comprised: the perception of the interviewee on the environmental crimes related to tourism, the personal impact on the individual, impacts, and conflicts that this type of crime might cause in the community.

However, non-directive interviews enable a degree of freedom for both the researcher and the interviewee, which means that although there were some guideline questions, each interview was conducted according to the participant's background and disposition to talk about the research theme or any other themes which he or she might find important and relevant. In this sense, it was expected that conducting this kind of non-directive interview would enable producing information with socio-affective content (Michelat, 1975) which is essential to understand the environmental victimization process. Due to the nature of the interview, the duration time varied from 1h30min to only 5 min in some cases.

After transcribing the interviews, the collected data was analysed based on the qualitative analysis of non-directive interviews proposed by Michelat (1975). Michelat proposes an exhaustive reading of the transcript of the interviews until reaching the point which he calls impregnation. You must alternate between the vertical and horizontal reading of the interviews, as a certain element may be missing from an interview, but be complemented by another. This material impregnation enables interpretation by the relationship between the various elements found and the construction of a relational scheme. This scheme is built and improved as the re-readings are performed and the different elements are integrated and related. The author points out that this process theoretically has no end, but it is necessary to stop when it is understood that the model has reached a certain stability.

In the context of the current SARS-CoV-2 (Covid-19) pandemic, visits to the area of Cumbuco were reduced and the contact with the potential participants were made by phone and, whenever possible, interviews were virtual. Safety protocols such as the use of masks, hand sanitizer gel and social distancing were followed for in person interviews to prevent the spread and contamination of the virus. The interviewees' participation was voluntary and by adhesion. A total of 15 interviews including both semi-structured and non-directive interviews were conducted. The profile of the interviewees comprised different actors who were somehow involved with this specific offender and/or environmental issues in the study area, and the age of the interviewees range from 18 to 62 years old (Table 13). The interviewees were identified in this study from I1 to I15.

Direct observation was also conducted during participation in the first reunion for the Blue Flag Award in Cumbuco, one public hearing promoted by *SEMACE* on the expansion of a road which connected Cumbuco to Icaraí, and another public hearing on 'Environmental Licensing in the municipalities and socioenvironmental conflicts in the coastal municipalities' promoted by *OABCE* and *MPCE*. The aim of these direct observations was to identify harms to

the environment according to the residents and their perception of these impacts in a non-controlled environment. Even though using non-directive interviews gives a degree of freedom to the interviewee, participation in a recorded interview is perceived in this study as a type of controlled environment which might intimidate the interviewees. In addition, documentary research focused on *IBAMA* and *SEMACE* secondary data, technical reports, judicial processes, and newspaper articles on the internet. Bibliographic investigation focused on the development process of Ceará State and Cumbuco as a tourist destination.

Table 13: Research participants

CATEGORY	N
Public bodies	3
<i>Cumbuco</i> Community leaders	2
Indigenous village <i>Anacé</i> Community leaders	2
<i>Cumbuco</i> residents connected to environmental issues	2
<i>Cumbuco</i> residents non-connected to environmental issues	2
<i>Cumbuco</i> non-residents actors	2
Civil organizations connected to environmental issues	2
TOTAL	15

Source: Research data (2022)

The results are presented in two parts in the next section. The first part introduces the development process of Cumbuco beach from being a traditional fishing community to become an international kite tourist destination, and some of the environmental conflicts in the region. This is an important step to comprehend the second part, which regards the case of *Vila Galé*. In order to understand the present, it is needed to critically review the past; and in order to understand the part, it is needed to acknowledge the whole.

5.5 RESULTS

5.5.1 Development process of Cumbuco Beach as a tourist destination

There was an intense demand for second residences along the coast of Brazil from the end of the 1960s. Tourism was still concentrated in the capitals and the spaces between them

were occupied by raw natural spaces, traditional populations, and small urban nuclei (Dantas, 2003). Tourism activity intensified in the 1980s when it started to be seen as a development alternative for the Northeast and a solution to mitigate the regional economic disparities (Fonseca, 2005). From the 1990s onward, foreign investment and large hotel chains were attracted in order to increase international tourist demand and foreign exchange inflow. The Tourism Development Program in the Northeast (*Programa de Desenvolvimento do Nordeste – PRODETUR*) was created in order to provide basic infrastructure to expand tourism. From this moment there was an exogenous occupation of these territories with the construction of big hotel complexes, foreign people, and people from other Brazilian regions purchasing land and houses to build hotels, inns, and restaurants.

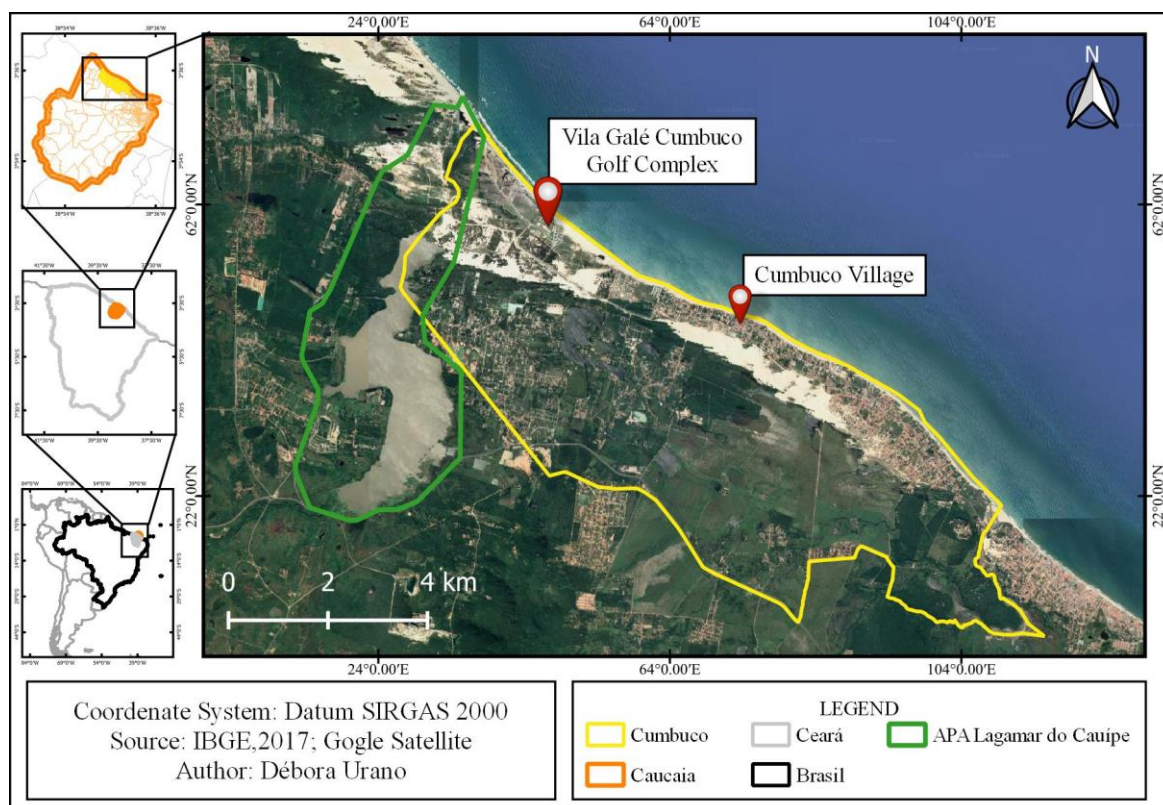
Tourism development in Ceará followed this same pattern. Until around 1960s and 1970s the coast of Ceará was occupied by remnants of indigenous people and other traditional communities who mainly survived on fishing and agriculture activities (Cavalcante & Silva, 2015). After the 1970s, the coast of Ceará started to suffer an intense demand of human occupation for leisure. Vasconcelos (2005) cites three different moments of this process. The first moment occurred at the end of the 1960s until the 1980s, and it is characterized by *veraneio* (summer vacations) with the construction of second residences and leisure clubs. This led to intense real estate speculation, disorderly occupation, and the initial transformations of coastal communities. The second moment, after the 1980s, comprises the construction of tourist facilities such as hotels, restaurants and water parks which were intensified with the infrastructure promoted by PRODETUR/NE. Ceará state opened its economy to attract foreign investment and international tourist chains. The third moment comprises an increase in the number of tourists and the interest in purchasing land and building residences and tourist facilities by foreign people and people from other Brazilian states.

Thus, the traditional coast communities were quite affected during this process. For example, this was observed by Urano, Cochand, Figueiredo, Nóbrega and Sonaglio (2015) in the case of Canoa Quebrada, a traditional fishing community that had its territory completely transformed by tourism development. Although this process brought some positive aspects regarding infrastructure, the expansion of tourist activity did not effectively cause an increase in value of local resources and in the expansion of the capacities, competences and freedoms of the local population. Moreover, this process is not only observed in Canoa Quebrada, but other coastal communities in Ceará such as Jericoacoara, Praia das Fontes, Morro Branco, Porto das Dunas and Cumbuco. Other communities not yet transformed by tourism induced development,

suffered conflicts over land tenure and environmental resources stimulated by tourism expansion.

However, the focus of this study is Cumbuco, a coastal community in the West Coast of Ceará only 35km from Fortaleza, the capital city of the State, and part of the Caucaia municipality (Figure 10). Caucaia is a municipality located in the metropolitan region bordering Fortaleza. It has a territorial extension of 1,223.246 km² and an estimated population of 368,918 inhabitants (in 2021). It is the second most populated municipality in Ceará. Caucaia has the third highest gross domestic product of the state, behind only Fortaleza and Maracanaú. Its gross domestic product is R\$6,919,758.04 (US\$1,754,280.14)¹¹ and its 2010 Municipal Human Development Index (HDI) was 0.682 (IBGE Cidades, 2022)¹². According to Caucaia City Hall, “the county is currently one of the main tourist destinations in Ceará, with the second largest tourist flow in the state, which is equivalent to about 300 thousand tourists per year, mainly due to the polarizing influence of Fortaleza and Cumbuco beach” (Prefeitura Municipal de Caucaia, 2022c).

Figure 10. Map illustrating the study area of *Cumbuco* *



*The area comprising Cumbuco illustrated in the map includes adjacent localities such as Garrote, Tabuba, Lagoa do Banana and others.

Source: Elaborated by the author (2022)

¹¹ US dollar exchange rate is equivalent to the annual average of the year 2019 according to IPEADATA (2022).

¹² Brazil Human Development Index in 2010 was 0.727 (PNUD; IPEA; FJP, 2013)

According to Lopes (2019), the occupation process of the area of Cumbuco had three predominant stages: (1) occupation of fishing communities living as “squatters” until 1970; (2) *veraneio* occupation from Fortaleza residents until 1980; and 3) tourist occupation from the 1980s onward. This process was marked by both public and private investments which aimed to transform the area into a leisure and enjoyment space (Lopes, 2019).

Until around the 1970s, Cumbuco was a traditional fishing community occupied during the first half of the 20th century by fishermen and their families who did not legally own the lands. It is told that around the 1920s, a fisherman who was unsatisfied with life in Fortaleza decide to move with his family into the area that is presently known as Cumbuco. The area comprised a desert strip of land along the coast with large fields of dunes, interdune lagoons and native vegetation with a vast amount of coconut trees (Lopes, 2019). The access was only through the sea or by the beach at low tide. Over time and because of abundant fishing, other families arrived and established themselves in the region. This period, which is common called by Cumbuco native residents of ‘*Cumbuco Velho*’, is characterized by people’s dependency on the available natural resources and on nature cycles. According to Lopes, “the management of natural resources was not only aimed for profit, but for their own sociocultural reproduction” (Lopes, 2019, p. 60, own translation).

However, in the early 1970s Cumbuco began to go into profound transformation with the arrival of an engineer who desired to acquire land for real estate development. He later created the Cumbuco Construction Company, and through this company he asked the Union for the demarcation and tenure of the land belonging to the navy¹³, bought more nearby lands and started to inform the people who lived in the area that he had bought the land and in a short time he would need it. The initial plan was to expel the residents, but he realized that if he could remove the residents to a smaller area nearby the planned allotment, he would benefit from State concessions (Lopes, 2019). According to Cavalcante and Silva (2015), a true front was then formed for the transformation of the coast of Caucaia which included the Caucaia municipal government, state of Ceará Government, Ministry of Labor (*Ministério do trabalho*) and the Captaincy of Ports (*Capitânia dos Portos*), among other political bodies and entities, which facilitated the Cumbuco Construction Company’s interests and profit (Lopes, 2019). The concessions made during the Village construction can be seen in Table 14, according to Lopes (2019).

¹³ According to Brazilian legislation the coastal area comprising 33 meters counted from the position of the average of the high-tide mark of 1831 belongs to the Union.

Table 14: Government concessions made during the construction of the Fishermen Village*

INSTITUTIONS	CONCESSIONS MADE TO CUMBUCO CONSTRUCTION COMPANY LTDA
<i>Caucaia</i> City Hall	It granted tax exemption to the Construction Company for the entire area of the land allotment, not only for the Village lands, but for all other subsequent allotments. Taxes would only be charged to the new owner from the sale of each lot.
<i>Ceará</i> State government	Installation of electricity in Fishermen Village, consequently reaching the allotment area. Supply of liquid asphalt to the construction company to apply on the road that connects Tabuba beach to the village.
National Supply Superintendence (<i>Superintendência Nacional do Abastecimento</i> - SUNAB)	Financing the purchase of food for the workers who were working on the village's construction.
Ministry of Labour	It allowed houses to be built on a collective basis: employees would work without a formal contract, leaving the employer not obliged to pay some rights granted to workers, such as thirteenth salary, vacations, social security, among others.

Source: Lopes (2019) *own translation

In this sense, a Fishermen Village was constructed in order to remove the residents from the planned allotment area and install them in a small and concentrated area. The reports differ on the number of families that lived in the area at the time and accepted to move to the new Fishermen Village and those who decided to leave Cumbuco, but the Village was constructed in 1978 with 80 houses. During the time of the opening, 79 families occupied the village.

Fishermen Village was then built and opened in 1978, with eighty houses divided into eight blocks, each with ten semi-detached houses, with two bedrooms, living room, kitchen (with a sink), bathroom (with a water tank and a sanitary appliance, without flushing), a tank for washing clothes, and *sumidouro*¹⁴. There was no electrical or hydraulic installation, much less sanitary sewage, only two wells supplied water to the entire village, which were jeopardised due to the lack of infrastructure for sewage collection (Lopes, 2019, p. 72, own translation)

The village comprised a total area of 50,616.00m² including an area destined for future residents. The perceptions regarding the construction of the village differed among the native residents. While some perceived moving to the Village as a donation by the owner of the Construction Company and were grateful to have moved to a better house, others saw it as an unfair negotiation and did not want to leave their original house (Lopes, 2019). The official and the media narrative was that the construction of the Village would benefit the native residents through employment and income generation and ease of transportation, while the “favours and privileges granted to real estate groups that guaranteed the reproduction and accumulation of capital were veiled” (Lopes, 2019, p. 77, own translation).

¹⁴ *Sumidouro* is an unlined well which allows infiltration of septic tank effluents into the soil.

Eight months after opening the Village, the first allotment for the construction of second residences emerged. In the following years the construction intensified and a total of four allotments were constructed: one in Parnamirim, one in Jabaquara and another two near the Village. The allotments at the time were mainly purchased by high income families from Fortaleza (Lopes, 2019) who would build big mansions for second residences. The construction process of the Village and the allotments was marked by dismantling dunes and burying several lagoons, as well as the introduction of non-native ornamental plants contributing to the creation of an artificial landscape (Lopes, 2019).

While there was consolidation of the second residence, the Cumbuco Construction Company started to invest in actions to boost tourist activity. The first facility built in Cumbuco towards touristic activity was Saint-Tropez des Tropiques Hotel, a collaboration between the mayor of Saint-Tropez, Michael Cuve, the president of the French tour operator “El Condor”, Robert Giarratano, and businessmen from Ceará linked to the Cumbuco Construction Company. The Diagonal Construction Company was in charge of the construction and the Hotel opened in 1989. Lopes (2019) highlights that the hotel project was criticized by the local environmental organization at the time because of the harmful use of the beaches.

During the 1990s, Cumbuco underwent several interventions and investments in hotels, inns, restaurants, beach tents and support equipment for recreational and sports activities which turned the Fishermen Village into a tourist destination. According to Lopes, this process was stimulated by several factors:

- 1) the acquisition of land ownership and the enhancement of the coastline through maritime summer vacations, which laid the foundations for the subsequent exercise of the tourist activity;
- 2) the conception of “free time” of work and the possibility of travel for pleasure, in search of the new;
- 3) the construction of a new image of Ceará, which changed the social imaginary about the state, formerly associated with drought, hunger and misery, and related to the sun, sea, rafts and paradisiacal places;
- 4) the creation of infrastructure which contemplates the tripod of the tourist business: transport, accommodation and agency, through public and private investments;
- 5) the promotion of the practice of nautical sports due to the climatic elements and the actions that placed Cumbuco in the circuit of world events;
- 6) public policies and social programs at the federal and state that consider tourism a strategy for economic development, providing infrastructure for coastal locations;
- 7) and, above all, a world order, which chooses peripheral places as support for the exercise of tourist activity (Lopes, 2019, p. 150, own translation)

From the 1990s the residents of Cumbuco started to face a lack of housing. With the occupation of the last empty area destined for future residents, the growth of the families and

the intense real estate speculation, it became difficult for original residents to remain in the Village. Many of the original houses of the Fishermen Village were transformed into commercial establishments and many residents now live in the surrounding areas like Parazinho/Tabuba, Lagoa do Barro, Icarai, Garrote (Caucaia Municipality) and Pecém (São Gonçalo do Amarante Municipality).

By the 2000s, there was an increase in condo resorts such as Ocean View, Cumbuco Dream Village, Cumbuco Dream Beach, Cumbuco Dream Sun and Waia Wai Cumbuco Eco Residence. Several second residences were sold to foreign people and transformed into inns and hostels to attend the increasing tourist demand due to the popularization of the region in the past years. Others are being demolished to build gated condos.

Nowadays, Cumbuco is consolidated as a tourist destination which attracts many international tourists because of the ideal climate to practice nautical sports like windsurfing and kitesurfing (Figure 11). It is very common to see several kites in the air and on the beach in Cumbuco during the day. Due to its proximity to Fortaleza, it is also famous for day use excursions of tourists and residents from the surrounding areas to spend the day in the restaurants on the beach or in the lagoons, or to spend the evenings in the busy nightlife.

Figure 11. Kites on Cumbuco beach



Image a: Kites on the sand beach during the celebration of Kiteday; Image b: Kites in the air during the celebration of Kite day

Source: Research archive (2021)

Another touristic attraction is the buggy rides in the dune fields that visit the lagoons (Parnamirim, Cristalinas, Banana and Lagoa do Cauípe) (Figure 12). Lagoa do Cauípe or Barra do Cauípe is a part of Lagamar do Cauípe APA where the Cauípe River meets the sea and forms a lagoon. It is equipped with some small restaurants on one side of the lagoon mainly owned

by native people. Banana is a more urbanized lagoon with one side occupied by large private houses and one part with small restaurants. Parnamirim and Cristalinas lagoons are interdune lagoons which were equipped with small tents and restaurants owned by the native population of the surrounding areas to receive tourists that arrive in the buggy rides. These equipment offers leisure activities such as waterslides and platforms (Figure 13).

Figure 12. Lagoons in Cumbuco



Image a: Cauípe Lagoon with kites in the air and beach tents in the background; Image b: Cristalinas Lagoon with some beach tents on the other side of the dune; Image c: Parnamirim Lagoon; Image d: Banana Lagoon with restaurants on the front and mansions in the background

Source: Research archive (2021)

Figure 13. Leisure activities offered to tourists in Cristalinas Lagoon



Image a: waterslide on the dune; Image b: platform structure in the dune; Image c: buggies on the dune
Source: Research archive (2021)

As can be observed, Cumbuco's tourist attractions are mainly based on its natural environment, and this natural environment is in constant dispute. One of the main objects of dispute is called Lagamar do Cauípe, an elongated body of water arranged perpendicularly to the coastline, originated from the Cauípe River dam which is formed through the field of mobile dunes. The body of water was altered by wind action, being subdivided into two lagoons, one further south known as Lagamar, and the other smaller, further north, known as Barra do Cauípe or Lagoa do Cauípe (Queiroz, Claudino-Sales, & Melo, 2022). On June 5th, 1998, the area became a State Environmental Protection Area (*Área de Proteção Ambiental – APA*) “after years of disorderly and deleterious exploitation by locals and outsiders” (Ministério Público do Estado do Ceará, 2022, p. 3).

The APA was created by Decree 24.957 and comprises a territorial area of 1,884.46 hectares, aiming to:

- I - protect the native biotic communities, river sources, slopes and soils;
 - II - guarantee the conservation of alluvial forest remnants, natural rainwater beds and water reserves;
 - III - provide the regional population with appropriate methods and techniques for land use, so as not to interfere with the functioning of ecological refuges, ensuring the sustainability of natural resources, with emphasis on improving the quality of life of these populations;
 - IV - order ecological, scientific and cultural tourism, and other economic activities compatible with environmental conservation;
 - V - to develop in the regional population an ecological and conservationist conscience.
- (Decree 24.957, 1998, own translation)

Lagamar do Cauípe APA is managed by a Management Board and any project to be implemented in the area needs to be appreciated by the consulting board and the licenses can only be granted after positive consent from it. In July of 1998, the Federal Prosecutor Office (*Ministério Público Federal – MPF*) initiated a procedure after a local newspaper article reported the disorderly touristic use of the area. The *MPF* requested Caucaia City Hall to

remove the small beach tents which were installed on the shores of the Lagamar do Cauípe lagoons without authorization of a competent body with a deadline of 30 days. The *MPF* also requested municipal law enforcement to stop access of cars and jet skis in the area. The beach tent owners (known as ‘*barraqueiros*’) made a petition requesting their permanency in the area stating that “before Decree 24.957..., which created the Lagamar do Cauípe *APA*, our activity and access to the beach already existed with the support of the municipal authorities: Caucaia City Hall and *FAMA*¹⁵” (Ministério Público do Estado do Ceará, 2022, p. 7).

The ‘*barraqueiros*’ stayed in the region and then in 2005 during a *SEMACE* inspection, 26 beach tents were identified on the shores of *Cauípe* river, with 19 at Barra do Cauípe and 07 at Cristalinas lagoon. The ‘*barraqueiros*’ were notified by *SEMACE* but refused to sign a term of commitment proposed by the agency. According to the *MPF*, the situation stayed as before “with no concrete measure to protect the *APA* against the destructive action of the illegal business of the 26 *barraqueiros*” (Ministério Público do Estado do Ceará, 2022, p. 8). In 2012, the Technical Support Center of the Attorney General of Justice (in cooperation with *SEMACE*), once more inspected Lagamar do Cauípe *APA* and produced a technical report in which they reassured the absence of operating licenses and several environmental irregularities, and potential harms to the environment such as soil sealing, preventing vegetation regeneration in the surroundings and generating solid waste and liquid effluents. Some beach tent structures can be seen in Figure 14.

Figure 14. Beach tent structures in Cristalinas Lagoon



Source: Research archive (2021)

¹⁵ The Municipal Environmental Foundation of Caucaia (*Fundação Municipal de Meio Ambiente de Caucaia – FAMA*) later became Caucaia Environmental Institute (*Instituto de Meio Ambiente de Caucaia – IMAC*)

However, the situation did not change even after this report. In a new attempt to protect the region, the *MPF* requested Caucaia City Hall in 2016 to take the necessary actions to remove the beach tents and stop environmental degradation. Only in December of 2021, and after several actions by the *MPF*, did Caucaia City Hall and *IMAC* assure their commitment to remove the tents.

Then in 2021, another dispute took place in Lagamar do Cauípe. On November 30th, 2021, *IMAC* issued an environmental authorization for dredging works in Cauípe Lagoon. After the works were initiated, *IBAMA* received a public report and inspected the area, identifying that the kind of work which was being conducted should have been authorized by *SEMACE* or *IBAMA* due to its great complexity and the environmental resources of the area. Later, *SEMACE* fined the Caucaia Municipal Government R\$40,000.00 (US\$8,026.00) for installing a potentially polluting activity without an environmental license from the competent body. However, the work was not embargoed.

A scientific-technical report produced by environmentalists identified that in addition to the dredging works, there was a formation of a road cutting the river with soil compaction, and the sand which had been removed from the lagoon was being used to backfill the southeast side of the lagoon, probably to build allotments. According to the report, “the machinery is altering the entire course of the river, removing sediments and vegetation from the bottom and banks of the lake, in addition to promoting damming, fragmentation, cutting and depth changes” (Queiroz, Claudino-Sales, & Melo, 2022, p. 152). Furthermore, aquatic fauna that lives at the bottom of the lagoon was being removed from its location and other animals that use the lagoon to feed, rest or lay their eggs are being affected indirectly.

The report also emphasizes that the works violate the Ramsar Convention, to which Brazil is a signatory and guarantees special protection of wetlands. Moreover, the works do not have *EIA/RIMA*, nor technical justification. In addition, the report questions why the work was not embargoed by *SEMACE* if the licensing responsibility was not from *IMAC* and the work was not approved by the *APA* Management Council.

In this way, the municipality, which has the competence to only license works of local impact according to the resolution of the State Council for the Environment (*COEMA*), could not have issued this Environmental Authorization. Now, if it is state responsibility to license, therefore *SEMACE*’s, why was the work not immediately embargoed by the state authority and only a fine was arbitrated? In this case, *SEMACE* may be committing a serious illegal action by omitting to legally perform established functions (Queiroz, Claudino-Sales, & Melo, 2022, p. 156).

The fines issued by *SEMACE* were motivated by the lack of consent of the management of the APA of Lagamar do Cauípe, which were later issued after an inspection by *SEMA* (*Secretaria Estadual do Meio Ambiente*), even though it was not approved by the Management Council of the Conservation Unit. How is it justified that this consent was granted in the face of two blatant illegalities, namely the lack of deliberation on the part of the APA Management Council and the lack of legal competence of the municipality to license the work? (Queiroz, Claudino-Sales, & Melo, 2022, p. 157).

The report finalizes by stating that the area is traditionally occupied by *Anacé* Indigenous People whose territory has been under study for demarcation by Funai since 2009. *Anacés* Indigenous People has traditionally occupied the coast of the municipality of Caucaia and São Gonçalo de Amarante, and are spread through 60 ‘aldeias’ (villages), especially in the surrounding area of Lagamar do Cauípe. Many still have their survival dependent on fishing in the region or leisure and tourist activities on Barra do Cauípe. As it is a region occupied by indigenous people, prior, free, and informed consultation stated in Convention 169 of the International Labor Organization (*Organização Internacional do Trabalho – OIT*) should have been observed. According to Article 6 of the Convention:

1. In applying the provisions of this Convention, governments shall:
 - (a) consult the peoples concerned, through appropriate procedures and in particular through their representative institutions, whenever consideration is being given to legislative or administrative measures which may affect them directly;
 - (b) establish means by which these peoples can freely participate, to at least the same extent as other sectors of the population, at all levels of decision-making in elective institutions and administrative and other bodies responsible for policies and programs which concern them;
 - (c) establish means for the full development of these peoples’ own institutions and initiatives, and in appropriate cases provide the resources necessary for this purpose.
2. The consultations carried out in application of this Convention shall be undertaken, in good faith and in a form appropriate to the circumstances, with the objective of achieving agreement or consent to the proposed measures (*Organização Mundial do Trabalho*, 1989).

In March of 2022, the *MPF* filed a public civil action (*Ação Civil Pública – ACP*) with request for an injunction to suspend the works in progress and demanding that the suspension remained in force until the Management Board made a decision and determined that *SEMACE* takes the necessary actions to determine the levels and forms of degradation. The process is currently in judicial contestation.

Nevertheless, it is important to highlight that tourism and leisure activities are not the only threat to Lagamar do Cauípe. This body of water is located in the area of influence of the Pecém Port Industrial Complex (*Complexo Industrial Portuário do Pecém - CIPP*). CIPP was constructed to serve basic industries focused on steel, oil refining, petrochemical and electric energy generation activities. The port was constructed in 2022 and currently 20 industries are part of the complex. *CIPP* activities demand a lot of water and an installation license of an

adductor system was issued in 2017 through which “three pumps with an individual capacity of 100.00 l/s (360.00 m³/h) would withdraw water from the ecological sanctuary to supply the Pecém port complex” (*Ministério Público do Estado do Ceará*, 2022, p. 11). This has created an intense conflict between Ceará State and *Anacés* Indigenous People¹⁶.

Another matter of dispute is the dune field located on the backside of the village that goes from Tabuba beach until the other side of Lagamar do Cauípe. The dune field is one of the tourist attractions of the region, but has been decreasing throughout the years due to advancing construction. In order to attend the tourists, it has been occupied by irregular tents next to the interdune lagoons (Parnamirim and Cristalinas) and is the space of intense use of buggy rides, 4x4 cars and quadricycles.

The area involving the dune field was recently the subject of an announcement by Caucaia City Hall regarding the creation of a Dune Park (*Parque das Dunas do Município de Caucaia*). The Decree 1,226 of October 07th 2021 declared the area of public interest for expropriation purposes and creation of the Park (Figure 15).

Figure 15. Polygonal of the declared area of public interest in Caucaia



Source: Município de Caucaia (2021)

¹⁶ More information on the environmental conflict between *CIPP* and *Anacés* Indigenous People can be seen at: <http://mapadeconflitos.ensp.fiocruz.br/conflito/ce-povo-anace-e-desrespeitado-e-expulso-de-seu-territorio-para-construcao-do-complexo-industrial-e-portuario-do-pecem/>

Nevertheless, this Decree has been contested. According to the Mayor, the Decree was established because the owner of the Cumbuco Construction Company, who is the owner of part of this land, showed interest in starting to develop the area. Therefore, concerned with the real estate speculation of the area for private interest, Caucaia City Hall decided to declare the area of public interest in order to stop any advance of construction within the dune field (Prefeitura Municipal de Caucaia, 2021b). Also, according to the mayor, the area established in the Decree was mainly owned by big Construction companies (Prefeitura Municipal de Caucaia, 2021b). The mayor's narrative is that the creation of the Dune Park is a measure to protect the environment while developing tourism:

development must come, but not by destroying the environment. In the near future, we will accredit professionals who develop tourist activities, we will define walking trails and buggy routes, among other actions, so that tourists leave with the best image of our city and the next generations have the opportunity to enjoy these spaces (Prefeitura Municipal de Caucaia, 2021a).

However, environmentalists and *Anacé* Indigenous People have been questioning the area delimited in the Decree. They have also questioned the lack of studies to delimit the area and have argued that the polygonal established in the Decree includes an area traditionally occupied by *Anacés* indigenous people, and they are concerned that these people will be removed from their territory. They also argued that the prior, free, and informed consultation stated in the *OIT* Convention 169 was once again ignored.

5.5.2 The case of Vila Galé

The Vila Galé group (VG group) is comprised by various companies and is one of the largest Portuguese hotel groups, ranking in the top 182 hotel companies in the world. The group is currently managing 37 hotel units, 27 in Portugal and 10 in Brazil. The group has hotel units in 7 States in Brazil: Ceará (Vila Galé Fortaleza and Vila Galé Cumbuco), Rio Grande do Norte (Vila Galé Touros), Pernambuco (Vila Galé Eco Resort do Cabo), Alagoas (Vila Galé Alagoas), Bahia (Vila Galé Salvador and Vila Galé Marés), Rio de Janeiro (Vila Galé Eco Resort Angra and Vila Galé Rio de Janeiro) and São Paulo (Vila Galé Paulista) (Vila Galé Hotéis, 2022).

The VG group initially arrived in Ceará with Vila Galé Fortaleza, located in Praia do Futuro beach, which opened in October 2001. Vila Galé Fortaleza was the first unit of the group in Brazil. Throughout the years, the VG group expanded its activities in Brazil and according to its president and founder in an interview to the Chamber of Commerce and Industry Brazil Portugal in Ceará they are the largest resort chain in Brazil and has plans to continue to expand.

We are the largest chain of resorts in Brazil. In 2019, we had 1.5 million overnight stays, which is equivalent to more than 500,000 guests. We have 3,180 rooms in the country. Despite the challenging scenario, we are happy with this important milestone [20 years of VG Group in Brazil] and we intend to grow even more, consolidating a sustainable expansion and strengthening our position in the Brazilian hospitality market (Câmara Brasil Portugal, 2021)

The last unit to open was Vila Galé Paulista in August of 2020, and there is another unit planned to open in the state of Alagoas in Carro Quebrado beach in July of 2022. Most of the hospitality units are located in front of the sea.

Vila Galé Cumbuco Hotel opened in 2010 (Figure 16). It is an all-inclusive five-star international standard resort which comprises an area of 100,000m² with 488 rooms and suites, 49 chalets, 04 restaurants, 03 bars, a spa, swimming pool, sauna, fitness gym, a tennis court and a multisport field. The hotel was the first resort with foreign investment in Ceará with a declared investment of R\$110 million (US\$62.5 million). As can be seen in Figure 16, the Hotel is amidst natural areas and a little bit distant from Cumbuco Village.

Figure 16. Bird's eye view of Vila Galé Cumbuco Hotel



Source: <https://diariodonordeste.verdesmares.com.br> Image by Tuno Vieira

The budget for the access road to the Hotel was around R\$10 million (US\$5.6 million) with resources from the State Treasury. An extra R\$49 million (US\$27.8 million) was invested by Ceará state through the Ceará State Tourism Secretary (*Secretaria de Turismo do Estado do Ceará – SETUR*), and Ceará State Infrastructure Secretary (*Secretaria de Infraestrutura do*

Estado do Ceará - SEINFRA) for works on the energy, water supply and sewage systems in Cumbuco (Diário do Nordeste, 2010a)¹⁷.

The hotel was the first facility of a larger touristic complex planned for the area, called Cumbuco Golf Resort. The complex is expected to reach 500 hectares and is located in the “coastal plain northwest of the municipality of Caucaia, east of the right bank of the Cauípe River, up to its confluence with the Atlantic Ocean, northeast of Lagamar do Cauípe, north of the CE-085 highway and northwest of the Banana lagoon” (TRF-5, Tribunal Regional Federal, 2009, p. 6). The complex was initially planned to comprise allotments with green areas and a golf course; resorts; shopping centre; and a school (TRF-5, Tribunal Regional Federal, 2009).

The land comprising Cumbuco Golf Complex was previously owned by the proprietor of the Cumbuco Construction Company (Diário do Nordeste, 2006). The area is located in front of the ocean between the Fishermen Village and Lagamar do Cauípe APA. The area also comprises dune fields. Locally, these dunes field are associated with the beach strip, Lagamar do Cauípe, interdune lagoons and marine terraces which “constitute a complex set of morphologies and ecosystems responsible for the structuring of the coastal landscape and for the generation of ecosystem flows of great socio-environmental, cultural and economic importance” (Meireles, 2021, p. 1). The dunes are also part of the *restingas*, which are considered permanent preservation areas (*Área de Preservação Permanente – APP*)¹⁸. In addition, representatives of the *Anacés* indigenous people claimed that the complex is within the territory that is under study for demarcation by Funai since 2009, as previously observed.

In 2018, the VG group expanded the Cumbuco Golf Resort Complex with the construction of VG Sun Cumbuco, a residential condominium which comprises an area of 70,000 m² with 354 apartments varying from 39m² to 99m², restaurant, swimming pools, jacuzzi, fitness centre, kids park and multisport court. VG Sun was the second enterprise located in Ceará of the VG Group in the category of real estate development. The first one was VG Fun built next to Vila Galé Fortaleza in Praia do Futuro.

VG Sun by Vila Galé was created with the aim of diversifying the offer of accommodation in the region, offering a complementary product to the Vila Galé Cumbuco resort in a self-catering regime. The idea here is to welcome guests who are traveling for leisure or work on long or short stays, and who wish to have a more

¹⁷ US dollar exchange rate is equivalent to the annual average of the year 2010 according to IPEADATA (2022).

¹⁸ According to Law 12,651 of 2012, APPs are “protected areas, covered or not by native vegetation, with the environmental function of preserving water resources, the landscape, geological stability and biodiversity, facilitating the gene flow of fauna and flora, protecting the soil and ensure the well-being of human populations”.

independent accommodation with bedroom, living room, bathroom and equipped kitchen to, for example, prepare a meal. We want VG Sun by Vila Galé to be the second home of Brazilians in Ceará”, explains [name suppressed], administrator of the Vila Galé network (Jornal do Comércio do Ceará, 2022).

VG Sun Cumbuco had an investment between R\$100,000 million (US\$28.6 million) and R\$120,000 million (US\$34.4 million) (Diário do Nordeste, 2016)¹⁹. The residential complex was built in a partnership with VG Cintra Cumbuco, an enterprise which is part of the VG Group but has its focus on real estate development with the Diagonal Construction Company.

In 2021, the VG Group continued its expansion plans in the area of Cumbuco Golf Resort Complex and started work on the construction of an allotment called Costa dos Ventos (Figures 17 and 18). The project comprises 121 lots with 400 m² each and leisure spaces.

In view of the construction progress in the complex, there was environmental concern with the area of Lagamar do Cauípe. Therefore, a technical visit was requested by the Environmental Commission of the Brazilian Bar Association in Ceará (*Ordem dos Advogados do Brasil Seccional Ceará – OAB/CE*), which resulted in a technical report that confirmed that the project was inside the dunes field, which is a permanent preservation area, and several environmental impacts that led to degrading the dune body were related to the project installation (Meireles, 2021).

Figure 17. Costa dos Ventos Project



Image a: Bird's eye-view perspective of the Costa dos Ventos Project; Image b: Outdoor billboard of the Costa dos Ventos Project where it says “First condominium of high standard lots in Cumbuco”

Source: (a) costadosventos.com; (b) Research archive (2021)

¹⁹ US dollar exchange rate is equivalent to the annual average of the year 2016 according to IPEADATA (2022).

Figure 18. Construction site of the Costa dos Ventos Project



Images a and b: Construction site of *Costa dos Ventos* Project
Source: Research archive (2021)

For instance, the following problems were identified: deforestation to allow the opening of access roads from the functional area of the project to the half slope and top of the dune; the construction of a wall advancing over the fixed dune; and soil compaction caused by the traffic of backhoe loaders and access roads in the dune body with soil removal and induced erosion. In addition, the aquifer recharge zone, the water table outlet sectors and interdune lagoons were also impacted by the LCV implementation works. According to the report:

With the demand necessary to supply the allotment to be implemented from the foothills to the half slope of the fixed dune, and the cumulative impacts related to the waterproofing of the Cumbuco dune field, the area of this analysis, will possibly raise the salinity levels of the water table in this sector of the coastal plain (already salinized further east with the waterproofing of the dunes). The Vila Galé resort is already, most likely, an inducer of salinization (Meireles, 2021, p. 4)

It is important to highlight that salinization of the aquifer is already observed in the Cumbuco area as a result of the increase in waterproofing of the dune field induced by the increase in population and in the demand for fresh water from the free aquifer by the Pecém Port Industrial Complex (*Complexo Industrial Portuário do Pecém - CIPP*), resorts, hotels, inns and houses as stated by the technical report and social reports. The technical report also affirmed that it was necessary to suspend the work activities in Costa dos Ventos allotment and other projects in aquifer recharge regions, interdune lagoons and fixative vegetation, and because it was of paramount importance for damage recovery (Meireles, 2021).

According to *SEMACE*, the licensing body, the project had its license issued in 2019, being approved by State Council for the Environment (*Conselho Estadual do Meio Ambiente – COEMA*), Management Council of the Lagamar do Cauípe APA (*Conselho Gestor da APA do*

Lagamar do Cauípe) and by the Environment State Secretary (*Secretaria Estadual do Meio Ambiente - SEMA*). However, an approved license does not authorize intervention into dune fields (Opovo, 2021a). The technician of the responsible bodies visited the site and confirmed that the project was in non-compliance with the granted license and the works were embargoed, but the license was not suspended (Opovo, 2021b). After a period, the works started again, and environmental NGO filed a public civil action (*ACP*) against the project in August 2021 based on the technical report requested by *OAB/CE*. The *ACP* intended to suspend the granted environmental license, as well as to suspend any activity on the project site until the final judgment of the action. According to the *ACP*, the license granted did not have the Environmental Impact Study or Environmental Impact Report (*Estudo de Impacto Ambiental/Relatório de Impacto Ambiental - EIA/RIMA*), which is a complex instrument that requires studying alternatives, and also allows public hearings. The *EIA/RIMA* is required for licensing projects which are within the Coast Zone (Law 7,661/98 regarding the National Coastal Management Plan - *Plano Nacional de Gerenciamento Costeiro*) and within the area defined by *IBGE* under the protection of the Atlantic Forest Law (Law nº 11,428/2006). *Costa dos Ventos* Project fits in both cases. However, the project license only had an Environmental Feasibility Study (*Estudo de Viabilidade Ambiental – EVA*) which is less strict than the *EIA/RIMA*. The process is pending in the State court, but the works on the project site continue, and a great part of the allotments have already been sold.

Based on the results presented here, the next section intends to discuss some important points that emerged.

5.6 DISCUSSION

The whole development process of Cumbuco is marked by actions and omissions which led to the production of crimes against the environment, as well as the installation of Vila Galé Cumbuco Golf Complex. The process was initiated in the 1970s when the environmental legislation and the law enforcement structure was still incipient, and it was done with no regulation. However, even with improvements in legislation and the law enforcement system, the results showed disregard for the regulations and constant crimes against the environment. This whole transformation process which led to numerous environmental crimes over five decades is complex and raises some points that need to be discussed.

5.6.1 Environmental crimes and tourism

The results showed that Cumbuco development was mainly driven by activities based on leisure and tourism. First with real estate development with the purpose of second residences, then with tourism facility development, and more recently a combination of tourism facilities and allotments and condos for second residences. In this sense, it can be stated that the process was not aimed to change the resident's quality of life, but rather to benefit private interests, with a focus on outsiders (whether they were visitors, tourists, or owners of second residences). While investing in leisure facilities for outsiders, the traditional leisure for some of the local residents were sometimes suppressed:

because sometimes our fun, for the resident, was to take, what tourists now call *skibunda*²⁰, for us it is called *tabica*, We'd take the *tabica* and go up. We took a high point in the dunes to go down and there [area where Vila Galé is now] was a point like this, because we went down the dune and on the bottom there was, (...) it was like a grass, it formed a little lawn around the lagoon. So we were able to go down, and some people fell into the lagoon. And that was all over (Interviewee I7, own translation)

In addition, the traditional way of life of local residents was disregarded and many spaces which were of public access have been privatized and sometimes even guarded by the State:

those who come through Barra do Cauípe, even if they go to Vila Galé, today, there are municipal guard vehicles where you can't go through (Interviewee I13, own translation).

Thus, the population had to adapt to the new context of tourism and leisure, being introduced in this economic activity, at the same time they were being pushed away to live in the surrounding areas. In this new reality of Cumbuco, everything orbits around activities based on tourism and leisure. In the words of one interviewee:

for me, in this community, in this region, everything here is about tourism, everything is interconnected (Interviewee I10, own translation).

The place is now full of facilities to attend tourists and visitors, whether they are hotels, inns, hostels, second residences, restaurants, beach tents, kite schools, kite shops, beachwear shops and so on. Most of the infrastructure works done by the State are associated to the

²⁰ *Skibunda* or *tabica* is an adaptation of a sandboard in which people sit and slide down from the top of the dunes into rivers or lagoons.

narrative of tourism development. Furthermore, real estate speculation is intertwined with tourism and leisure. Tourism and leisure are used by real estate development as a mechanism to advance into Cumbuco including advancing into raw natural spaces. Many real estate companies are also tourist companies or vice versa. For example, the VG Group has their branch of real estate development. Therefore, although this research agrees with Butler (2000) that it is rather difficult to separate the effects of tourism from other social and economic activities, in this specific case of Cumbuco (which can be probably seen in other communities which were transformed by tourism), it can be stated that most aggressions to the environment are consequences of how tourism and leisure are managed, produced and consumed.

In this sense, a lot of tourism-related environmental crimes were identified in Cumbuco, for example: (1) soil compression, (2) alteration of river course, (3) removal of aquatic fauna; (4) irregular construction in an *APP* area (mainly in dunes), (5) deforestation; (6) salinization of the local aquifer; (7) non-compliance with discharge of solid waste; (8) pollution of water and soil due to the lack of basic sanitation structure; (9) degradation of feed, lay and reproduction habitats of non-human animals; (10) removal of sediments and vegetation from body of water; (11) irregular construction in indigenous territory; (12) non-compliance with environmental license; (13) discharge of domestic effluents from sewage treatment station, and (14) irregular commercialization of lobster. Most of these environmental crimes were linked to the VG group, but they are not exclusive of the VG group. Furthermore, it was identified that the victims not only comprise human-animals, but also non-human animals and the ecosystem itself, mainly the dune camp, Lagamar do Cauípe, and groundwater aquifers.

In the case of human animals, on the one hand it is important to highlight how dissociated Cumbuco residents are from the VG complex and its crimes. In a first approach, the research did not ask specific questions about the VG group, and only one of the interviewees mentioned the construction of the VG complex and crimes associated to it. The others would talk about it, only if they were questioned, and the feeling was that they perceived the construction as a crime and they have heard about environmental problems the VG group had, but the official bodies authorized it so there is nothing to do, or it is a matter for the “big ones”. Most of the tourism-related environmental crimes in the perception of Cumbuco residents were things they see on a day-to-day basis like irregular solid waste disposal, the lack of basic sanitation, and the construction progress in the camp of dunes; and these things are directly linked with the appearance and scenery of the village which impacts tourist activity. On the other hand, *Anacés* indigenous people who lived in the surroundings of the village and closer

to the VG complex and have an intrinsic connection with Lagamar do Cauípe, not only see themselves as victims of the group activities, but also of the government actions. They are actively reporting crimes in the region with the cooperation of environmentalists and environmental organizations.

Another discussion point is the tourism-nature paradox. If the scenic natural beauty is the main tourism attraction in certain regions, how does tourism development continue to harm the environment and destroy the natural landscape? This falls into Butler's (2000) statement that the dependency of tourism upon a healthy and pristine environment was inaccurate and false. Everything can be transformed into a tourist attraction, even death and disaster, as argued before. And even though natural environment can be a force of attraction, it seems it is not that important to maintain natural ecological processes, but a nice landscape with good infrastructure. If this process mischaracterizes the natural environment and harms ecological processes, there are always anthropic actions that can be done to maintain a nice scenic appearance.

Anyways, if harm to the environment starts to impair the tourist attraction potential in the long run, big tourism corporations can easily move to another location. Those who suffer the consequences are the local people who had their life transformed and are now dependent on tourism activity. For instance, in the case of buggy rides, the dune field in Cumbuco has been reduced throughout the years and the dunes are getting smaller. If there are no dunes, what will these people who work as buggy drivers do? If the lagoons disappear or become polluted and unsuitable for bathing, who will the local beach tent owners serve? The environmental harms are not only dangerous to the natural process or to human-animal health and quality of life, but also to the survival of the tourism activity itself, and to the economic benefits which are so promoted by tourism advocates. But it will likely have a real impact on the local people who were inserted without notice into this process.

5.6.2 State-corporate crime in Cumbuco

Another point that deserves attention is the nature of the environmental crime and the offender. The results showed that the State actively participated in the transformation process of the Cumbuco area, which was once traditionally occupied by fishermen and Indigenous People, into a leisure and tourism area to mostly attend outsiders. In addition, this transformation produced many environmental crimes which can on many occasions be characterized as state-facilitated crimes (Kramer, Michalowski, & Kauzlarich, 2002). A few

factors can be cited to corroborate this statement: (1) the State facilitated the acquisition of land in marine areas by private owners and corporations; (2) the State facilitated the removal of the fishermen from their traditional land and the construction of the Fishermen Village through government bodies and through financial and infrastructure benefits; (3) The State facilitated the creation of infrastructure for real estate speculation and tourism, as was observed in the case of the Cumbuco Construction Company and the Vila Galé Complex; (4) The State funded part of tourist facilities in the case of Vila Galé; (5) The State failed to enforce environmental regulations, as was seen in the case of Lagamar do Cauípe and Costa dos Ventos project; (6) the State failed to request more complex environmental impact studies and apply embargoes as was seen in the case of Costa dos Ventos Project; and (7) in the case of dredging works in Lagoa do Cauípe, the State worked actively to produce environmental crime, which according to public reports and technical reports, the works were also used to benefit future allotments and probably the Vila Galé Complex.

These points show how State and Corporation worked together to mutually benefit, even though their actions produced several harms to the environment; this is also portrayed in the testimonies of the interviewees:

These investments [Vila Galé Complex and other allotments] were brought by several reasons, but they [Corporations] also showed that progress was very good and that not only the municipal government, but the state government was colluding with all this. The State, as much as it says that it created the *APA*, that created the *APP*, the one in Cumbuco and Lagamar do Cauípe, it does not protect them in any way. (Interviewee I14, own translation)

The above statement shows this contradictory nature of the State's responsibility for the environment. Despite creating conservation units and preservation areas, the State fails to protect them for several reasons which goes from insufficient State law enforcement structure, as seen in chapter four, to attending private and political interests. The State depends on investments from private corporations and in order to attract them, they sometimes collude to overlook environmental rules, often using the narratives of economic development which ends up legitimizing the environmental harms (Ebus & Kuijpers, 2015). As can be seen in this article on Ceará State official website, the government celebrates the official launch of the VG Cumbuco Hotel, highlighting the job generation and the contribution of the facility to Ceará's development in 2010:

[Ceará] Governor Cid Gomes and the Secretary of Tourism, Bismarck Maia, participate this Saturday, at 7 pm, in the official launch of the Vila Galé Cumbuco Hotel, considered the first international standard resort in Ceará, located in front of

Cumbuco Beach, at 41 km from Fortaleza. The venture is owned by Portuguese capital, owned by the Vila Galé group. During the works, around 800 people were employed who worked directly in the construction of the enterprise. Upon completion of the entire complex, the resort is expected to generate 300 direct and 900 indirect jobs, further contributing to the development of the local and state economy (Governo do Estado do Ceará, 2010).

After a little more than 10 years, Vila Galé is one of the main tourism-related environmental offenders in Ceará and its expansion projects continues to generate conflicts and harms to the environment. The investments brought by private foreign corporations are used as a bargaining chip to loosen environmental regulations. For instance, in a local media article regarding future investments of the Vila Galé in Ceará, the VG Group President criticizes the state environmental body, threatening that the lack of agility in releasing the environmental license may lead to the investment withdrawal:

The president of the VG Group, [name suppressed], also harshly criticized the bureaucracy of the State Environmental Superintendence (*SEMACE*), responsible for environmental licensing for the construction of projects in Ceará. “We’ve already talked to the owners, but if *SEMACE* gets in the way, we’ll go to another state,” he emphasized. (...) “I would say that *SEMACE* is a blocking force for the development of the state. In Cumbuco, we have a project that is not working because of *SEMACE*’s lack of agility. We are permanently in trouble”, said the president of Vila Galé. (Diário do Nordeste, 2018b)

I have two investors interested in having a project in Cumbuco, but we know that there is this difficulty with *SEMACE*. We have a huge area there to develop still (VG Group President in Diário do Nordeste (2018b))

It is worth noting that even with the so-called bureaucracy of *SEMACE* (which we could expand to other environmental bodies like *IBAMA*), the non-compliance with environmental legislation seems to be frequent in tourism development projects. In this process, the local population are induced to believe in the constant narrative of development based on the increase of income and job generation in which the environment is disregarded. Moreover, this narrative is not only constructed by the State, but reinforced by the media, as can be seen in many media articles regarding Vila Galé in Figure 19.

What has been forgotten in this process is the cost of environmental crime, and this is what many authors criticize regarding development based on economic growth. As Ruggiero and South (2013b) stated, “environmental degradation is not measured as a cost of development based on economic growth”. They also stated that companies are not charged for the harms which are consequences of their actions. As was shown here in the case of tourism companies, there is a lack of law enforcement, most of the companies do not comply with environmental legislation, they cause much environmental harm, and when they are fined for their actions, the

percentage of payment is minimum. Furthermore, these harmful companies indirectly receive state benefits, as was shown in the results.

Figure 19. Media's news article headlines*



*Headline a: New hotels will invest more than R\$800 million on the coast of Ceará. Hotel chains such as Carmel, Vila Galé, and Hard Rock are betting on tourism in Ceará, which grows with the boost of the air hub. Headline b: Vila Galé invests R\$15 million to expand the resort. The facility of the Portuguese group in Ceará will gain 72 more apartments by the end of this year. Headline c: Vila Galé invests in Cumbuco in residential of R\$100 million. According to the group, 400 houses will be built in the region in an area of 220 thousand square meters. Headline d: Vila Galé will invest another R\$200 million in the country; Cumbuco is one of the aims.

Currently, the Portuguese group has two projects in Ceará, two in Bahia and two in Rio de Janeiro.

Source: diariodonordeste.verdesmares.com.br

In addition, the narrative of economic development is usually a motor of conflict within the communities. It is very common to see those who defend the environment being portrayed as ‘against development’ and they often need to justify their actions reassuring that they are not against progress.

Because as long as people believe in this progress, which is a progress that only aims at profit, this world will be destroyed and then we [people who defend the environment] go into this contradiction, we keep saying that it is the opposite, that we need to preserve in order to progress, because an ecologically correct progress where

you work in ecology, the sustainable side, this is for the rest of our life (Interviewee 14, own translation)

We are not against progress, but when progress does not come against us, when do not go over our people, our history (Anáces Indigenous People Representative in Prefeitura Municipal de Caucaia (2021b))

[I want] to say to the population of Caucaia that we are not against progress or against employment,[...], we are not against it, we just want progress to come in its correct time, [...] we want progress, we want people of Caucaia to have a good quality of life, but in the right time and respecting the indigenous peoples who are here (Anacés Indigenous People representative in Prefeitura Municipal de Caucaia, (2021b))

This narrative that people who defend the environment are against progress seems to work to promote a division in communities between those who defend the environment and report environmental crimes and those who believe in the state-corporate narrative. This social division may lead to undermine social control of environmental harms. And when it comes to corporate-state crimes, social control is an important tool to protect the environment (Kramer, Michalowski, & Kauzlarich, 2002; Bradshaw, 2014).

It seems that environmental crimes are in essence a dispute of narratives. Sometimes these narrative conflicts go beyond local barriers (within communities) and go on into media. For instance, in the case of the dredging works on Cauípe Lagoon, an article in a local media newspaper on April 19th of 2022 stated that Caucaia City Hall was recovering the Cauípe Lagoon and that political opponents were creating fake news against the works. The article was based on a video made by a '*barraqueiro*', who local people say is not native from the region, defending the work conducted by the City Hall in the lagoon:

The Municipality of Caucaia is recovering the Cauípe Lagoon, which was threatened with disappearing due to the amount of sand that accumulated at the bottom and spread the volume of water, accelerating its evaporation over the years. In the requalification works, the City Hall is dredging the lagoon, which is the technique of removing the sand displaced by the wind.

Despite Caucaia City Hall containing the threat of extinction, the lagoon now faces the threat of fake news, when political opponents began to reverse the action from dredging to filling, confusing people who are not well informed on the subject (Opovo, 2022a)

On April 21st of 2022, a note signed by various environmentalists and social movements was published in the same newspaper to clarify that that the environmental crimes reported regarding the dredging works were not fake news:

We went to the field to verify the progress of the activities, and we prepared a technical report that was sent to the State Prosecutors Office, in which we documented the entire situation of environmental degradation in progress. The State Prosecutor's Office also carried out an *in loco* reconnaissance and found the

irregularities, which is why the work was embargoed. In this sense, there is no fake news regarding the landfill: it is effectively a brutal aggression to the ecosystem, which may not resist the abuse (Opovo, 2022b).

This note was contested the same day by another note in the same newspaper, which stated that “the lagoon is dying and needs the benign action of man to survive” (Opovo, 2022c). The note also questioned the actions taken by environmentalists in order to protect the environment:

The case of the current administration of the Municipality of Caucaia is similar to the one of the Government of Ceará, when the Castanhão Water Reservoir was built. Environmentalists accused damage to the region’s ecosystem, entities complained about the cultural impact on the population of then Jaguaribara, opposition politicians classified the work as a “white elephant” and a waste of public money. Interventions and embargoes were requested every day. Twenty-seven years later, Tasso Jereissati [former Ceará state governor] never received an apology or recognition from critics, given the importance that Castanhão proved to be for Ceará. Ah, some of the critics are critics today... (Opovo, 2022c)

This article aimed to discredit the environmentalists’ reports and undermine environmental social control once more. The conflict of narratives turns every environmental problem into a complex issue, which confuses society, creates conflict inside communities and undermines social control. In fact, it seems to be the purpose of it. This is also brought up in some testimonies:

They managed to manipulate those people against us, you know, and this is very sad. Today I talked to a person from there [Cauípe] who talks like this: “I don’t know in who to believe because they said they are bringing improvements to us, but at the same time, you say that’s not it. So, we don’t know”. And I understand that people’s heads get confused with a lot of things (Interviewee I13, own translation)

In addition, the lack of understanding of how official environmental regulations work and this contradictory role of the State (in other words, protect and produce harm at the same time) also undermine the social control of environmental damage causing confusion and a sense of impotence in people:

when I see the environment being deforested for me it is already a crime, but after months later they say that everything was authorized by the higher authority of the government (...) (Interviewee I7, own translation).

From the moment they say they have authorization and have signed documents releasing it, there is nothing we can do (Interviewee I7, own translation).

So, I keep asking myself, how do the governments, the bodies allow to make an allotment on the top of an APA. Because the hotel [Vila Galé] was already built

irregularly, then you will build an allotment in a dune park, inside an APA
(Interviewee I1, own translation)

These testimonies show how people who are not involved with environmental issues get confused sometimes about regulations, and what is legal and what is not, what is wrong and what is right. Both environmental legislations and environmental law enforcement are complex. Although they perceive an environmental crime, they do not know the legal basis to refer to. Therefore, the work of environmental civil organizations is crucial to help people understand the environmental legislation and know how to seek for assistance and remediation.

As seen in the previous chapter, due to the lack of structure of the official environmental bodies, most of the inspections are conducted in response to public reports. But when state collude with corporations to produce harm to the environment, social control is undermined. As was observed in the case of Cumbuco, this happens because: (1) the State, corporation and media portray a strong narrative of economic development and progress that makes environmental harms seem to be an evil for a greater good; (2) conflict narratives are created in order to confuse people within communities and to discredit environmentalists; (3) and, the contradictory role of the State (offender and protector) together with the lack of understanding of environmental legislation and the nature of environmental crime and victimization cause a sense of impotence in the general public.

5.6.3 Power imbalances and environmental regulations

The last point to be discussed which emerged in the research is that many environmental crimes were also committed by local people. This transformation process of Cumbuco area into a tourist and leisure space also transformed how traditional people lived. While there are still people who survive from fishing, this has become less common and old and new generations are driven to be inserted into the touristic dynamic. They are becoming beach tent owners, kitesurf instructors, buggy drivers, workers in tourist facilities or small business owners. And in many cases their activities are not in compliance with environmental regulations, as was seen in the case of beach tent owners in Cauípe Lagoon and on the top of the dunes, and they also cause harm to the environment.

There is a fine line of what is accepted as harm to the environment. When environmental regulations are used against economic disadvantaged groups, it becomes impossible for them to use the same means as powerful private corporations. Financial power is therefore crucial in defining whether actions are or are not harmful to the environment. Many infraction notice

processes of big corporations go on to become a long judicial process, which takes time, money, and expertise, for which economic disadvantaged local people do not have. In the case of Vila Galé, they are a repeat environmental offender in Cumbuco, but they still manage to have their interests served, and they continue their plans to expand in areas of natural importance with assistance from the State. However, the native communities with no economic power many times do not have the means to comply with the environmental regulations and continue their activities. And sometimes this is the only economic activity that provides their livelihood. This was observed in the analysed documents:

We consider the intervention of the Public Prosecutor's Office to be opportune, as the environment and the entire community are being harmed to the satisfaction of a dozen people who have started to commercially explore that place, which was once one of the best preserved on the coast. We know from experience that, if nothing is done now, the situation becomes irreversible due to the social problem that arises as the '*barraqueiros*' tend to move with the whole family to live, even in subhuman conditions, inside the tent. We believe that there is another solution to the problem of unemployment in Caucaia that is less harmful to natural resources (Official notification nº303/96 GAB/DPU/CE in Ministério Público do Estado do Ceará (2022))

We hereby request from your Excellency the permanence of the fishermen '*barraqueiros*' in their respective facilities. Our request is justified by the following facts: 1 – It was we, the '*barraqueiros*', who attracted tourists to our community, 2- We are the providers for our families and at the moment we have no other source of income. (Petition from the Residents and Fishermen of *Barra do Cauípe* Association in Ministério Público do Estado do Ceará (2022))

Mr. [name suppressed] did not sign the term of commitment presented by SEMACE, having only signed a term of hearing due to the fact that he did not feel enlightened about the applicable legislation, as well as the financial impossibility of relocating the tent outside the permanent preservation area within 90 (ninety) days (Technical report 713/2005 SEMACE in Ministério Público do Estado do Ceará (2022))

Mr. [name suppressed], one of those responsible [for touristic activities on the top of the dune], reported that he has been working with the tourist activity for a long time. It is a low impact activity, however, as dunes are considered Permanent Preservation Areas, an environmental license would be required for its operation. According to the interviewee, he has already sought IMAC, but due to the high cost of licensing, he was unable to apply for an environmental license. (Relatório Técnico 286/2012 SEMACE in Ministério Público do Estado do Ceará (2022))

In a place where the traditional way of life was completely transformed by private and State interested, where the local community was not consulted and had to adapt to new economic activities, how can we define what is a harm that is necessary for human survival and what is not? Is the defined line between locals versus foreign? Individuals versus companies?

Profit versus subsistence? Are those local people environmental offenders or environmental victims?

Brisman and South (2018b) present a relational perspective when approaching ordinary acts and omissions that causes environmental harm which could be used in this matter. For them, the issue of ordinary acts and omissions should be perceived in both relational (comparative) and inter-relational terms. In the words of the authors:

By relational, we mean based on the specific circumstances of (the) harm; by inter-relational, we wish to accentuate that our interactions with our environment are fundamentally mutual and reciprocal - even if humans do not engage fairly, generously or responsibly in this relationship. Thus, for example, instead of absolutist positions, such as 'the taking of wild animals is bad and should be illegal' or 'the taking of wild animals is bad because it is illegal', we might consider the poor person who poaches for food to feed his family in relation to (or in comparison to) the wealthy person who poaches for sport and trophy. Our inter-relationship with nature then needs to be conceptualized in relation to our means and capacity to act. (Brisman & South, 2018b).

Based on this perspective, the native resident with his beach tent in non-compliance with environmental legislation should not be perceived the same way that a big foreign corporation with many resorts in the country. Moreover, they might even be considered an environmental victim of the whole development process of Cumbuco which aimed to benefit private and State interests. However, this is a matter that deserves more investigation.

5.7 FINAL CONSIDERATIONS

This chapter aimed to understand how the process of tourism-related environmental crimes occurs through a case study of one of the main tourism-related environmental offenders in Ceará, the Vila Galé Group, located in Cumbuco beach, one of the main tourist destinations in Ceará. The results showed that in the case of Cumbuco's development process, the 'progress' was not aimed toward changing the resident's quality of life, but rather to benefit private and State interests. The transformation of the location was driven by the construction of leisure and tourism equipment for outsiders, while leisure practices and common natural goods have been privatized. In this process, State and corporation worked together to mutually benefit while disregarding environmental and social issues. This process is marked by a dispute of narrative that creates a false dichotomy between development and environmental protection, creates conflicts within communities and mostly impacts native residents with no economic power.

It also showed the unfair use of environmental legislation. While corporations have knowledge, economic and political power to have their interests met, native residents often do

not have the means to comply with environmental regulations and are persecuted by the State. In addition, it discussed that tourism based on economic development does not need a balanced natural environment which respects ecosystem dynamics, non-human animals, and human-animals, but a false natural appearance with good infrastructure to be sustained.

One limitation of this study was the access to documents. The number of documents, judicial processes, infraction notices and reports that could be used in this research is vast and is spread in many public bodies. So, those analysed herein were just a small portion of them that I was able to access in a pandemic context. More documentary research is needed to better understand this process and to confirm the different narratives. The conflict of narratives was also a difficulty in this research, as there are often different versions of the same problem. This study showed that this is a tool to confuse people and diminish social control. However, it was important for this research to try to verify the testimonies whenever possible. This took a great amount of time and work. In addition, the results identified in this research and the discussion that followed will require other theoretical contributions to be explained, such as the use of natural resources for tourism purposes as a means of survival by residents.

Furthermore, this is an ongoing process, and although the research determined one date to end data collection, the unfolding of these conflicts and crimes is still ongoing. In this sense, there is much more that could be investigated in this specific case. Finally, the discussions herein only refer to one case of one offender and the community in which it is located. Other tourism-related environmental crimes and conflicts were reported in other municipalities in Ceará State during the research. Thus, it is encouraged that more research including other cases is conducted.

6. CONCLUSION

This thesis aimed to understand the relationship between environmental crimes and tourism. It emerged from the gap in tourism literature regarding environmental crimes and from Green Criminology literature, which rarely studies the crimes which are a consequence of tourism activity. Based on the dialectical scientific method, using Critical Tourism and Green Criminology as theoretical umbrella frameworks, and employing different research and analysis techniques, this thesis was divided into three different moments. The first moment intended to understand how Tourism and Green Criminology fields interconnect in the world literature. Then the second moment attempted to identify the patterns of tourism-related environmental crimes. Finally in the third and last moment, it tried to understand the processes involving tourism-related environmental crime. Each of these moments brought important results and discussions related to the relationship between environmental crimes and tourism.

The first moment discussed the interconnection of the Tourism and Green Criminology fields through a critical literature review. It focused on the relationship between tourism and the natural environment within the Tourism field, and on the research within Green Criminology field. It demonstrated that tourism research on the nexus tourism-environment has had little critical progress over time. The sustainable development discourse invaded this theme and research on tourism and environment became more a way of sustaining tourism which in fact sustains the ecological processes which are needed for life on Mother Earth. Moreover, it reinforces that tourism from a local perspective does not need a healthy environment to happen, and critically researchers need to think globally and perceive that the focus should not be on sustaining tourism, but to preserve the ecological basis of the planet. Other than this perception, tourism activity will only have green-washed behaviour that tackles appearances and not the essence of nature preservation. It also acknowledges that the focus of environmental impact should be on tourism industry and State development and not on tourist behaviour. Furthermore, it is not to say that tourist environmental behaviour cannot be studied, or is less important. The understanding of tourist environmental behaviour over time is of great importance. However, a real change can only be possible when tackling the structures which will shape tourist behaviour. Lastly, a theoretical framework based on Green Criminology is proposed which can help researchers to critically approach environmental impacts of tourism which focuses on the structures and mechanisms of oppression that allow these impacts to happen.

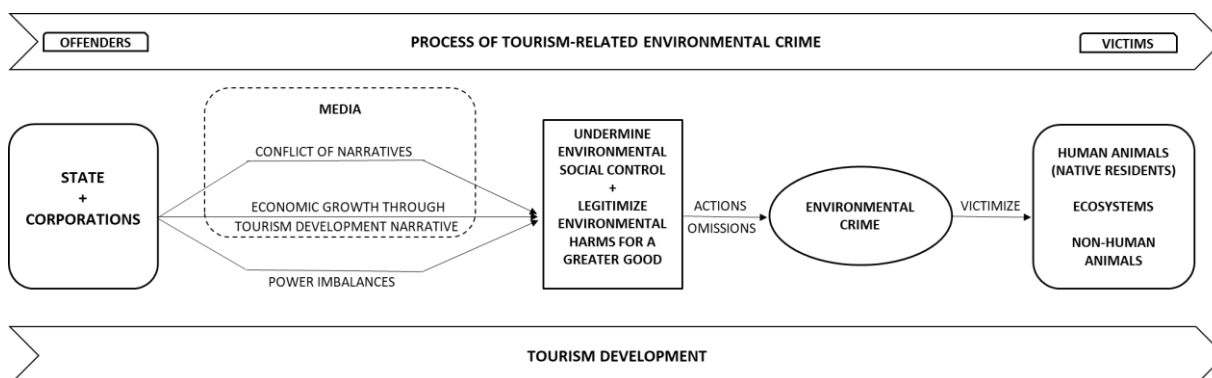
The second moment discussed the patterns of tourism-related environmental crimes. In order to do so, a secondary data analysis regarding environmental infraction notices issued in

Brazil related to the tourism industry was conducted. This analysis revealed the difficulty of having an overview of environmental crimes in Brazil because of the complex law enforcement system which is constituted by many agencies at different government levels. There is a bigger problem especially regarding tourism activity because tourism enterprises are often considered of low polluting potential, which gives the main responsibility to inspect them to the municipality environmental bodies. However, most of the counties in Brazil do not have a structured body with technical resources and personnel to conduct these inspections. In turn, this makes it difficult for researchers to have access to reliable data as most of the offenses are not even registered. Nevertheless, even with the lack of reliable data on environmental crimes, the study showed some patterns of tourism-related environmental crimes such as non-compliance with the environmental license for construction and operation, especially in permanent preservation areas and indigenous territories; deforestation; irregular fishery commercialization, which relates to illegal fishing; and the illegal captivity of wildlife. Although the non-compliance with environmental license is within the administrative spheres, it is a door to many environmental crimes to occur. If tourism researchers start to investigate these licensing processes, as well as the processes which follow the environmental infraction notices, it is possible that many crimes involving tourism activity in Brazil would be unravelled.

The third moment intended to go beyond the patterns identified in the secondary data analysis and focus on the processes involving tourism-related environmental crimes. In this sense, it used the case study technique of one of the main tourism-related environmental offenders in Ceará which was identified in the secondary data analysis, the Vila Galé, Group. In a relational and totality perspective, the investigation tried to understand the development process of Cumbuco (where Vila Galé is located) into a tourist destination in order to understand the processes that allowed tourism-related crimes to occur. The results reinforced that although the natural environment is used as a tourist product, it is more important to maintain an aesthetic landscape with good infrastructure than to maintain the natural ecological processes. It also revealed that both State and corporations perpetrate tourism-related environmental crimes. However, many of the crimes can be considered State-corporate environmental crime since the State sometimes performs actions or omissions which facilitate perpetration of environmental crimes in order to benefit private interests and their own. In this process, the offenders, sometimes using the media, legitimize these crimes and undermine environmental social control through discourses of economic growth led by tourism and leisure development, provide conflicting narratives regarding the nature of environmental damage and

protection, and power imbalances in the use of environmental legislation. As a result, it victimizes the local ecosystems, non-human animals, and native residents in several different ways. A framework of the process of tourism-related environmental crime is proposed in Figure 20.

Figure 20. Framework of tourism-related environmental crime processes



Source: Elaborated by the author (2022)

In addition, the results showed that many native residents were pushed into the new local tourism dynamic and now rely on tourism to survive. However, they do not have the legal knowledge, financial resources, and political power that big corporations have. Hence, they are often persecuted by the State in order to comply with environmental regulations. Instead of being perceived as victims of the repeated State-corporate environmental crimes, they are treated as environmental offenders. In this sense, there is a need to perceive tourism-related environmental crimes in a relational and inter-relational perspective, as proposed by Brisman and South (2018b). However, this is a matter for more investigation.

From an overall perspective, using a Green Criminology framework to understand the relationship between tourism and environment is a fertile ground. It goes from perceiving tourism as an economic activity and how environmental crimes can impact tourism, to understanding how tourism perpetrate environmental crimes, passing through thinking about tourism as a mechanism to reduce environmental crimes. This research took a more critical approach regarding how tourism perpetrates environmental crimes. As it was previously stated in this thesis, most of the research on tourism-related environmental impacts are conducted in other fields from Tourism. Therefore, Green Criminology gives tools to tourism researchers who are not from the natural science field to expose these impacts beyond the perception of planners, residents, workers, and managers, which is a common perspective in tourism studies. Moreover, as the relationship between human animals and the natural environment has evolved,

Green Criminology can also help tourism researchers to perceive that most of the so-called environmental impacts of tourism are now perceived as crimes and the main victim is Mother Earth. But further than that, Green Criminology will help critical researchers to understand the processes behind these crimes, exposing the power relations, the discourses that legitimize these crimes, the offenders, and a whole system which sustains the relation tourism has with the natural environment. It will also give voice to the victims, will reflect who the victims are, and what is the meaning of being a victim.

However, it is important to say that this thesis does not perceive tourism as the worst of all evils, but believes that the way tourism is mostly currently produced in viewing the natural environment as a resource for human activity to be transformed, and disregards the ecological processes that maintain life on Mother Earth. In fact, it is perceived by this researcher that tourism is so much more than an economic activity. It is the encounter of the individual with the unknown. Traveling allows the individual to connect with the different: different places, different people, different culture, and different languages. This, in a utopic theoretical perspective, is able to make individuals open to what is not familiar to them and generates feelings of understanding, respect and the comprehension that we are a small part of a whole. In this sense, these encounters should be part of our lives. How this can happen without collapsing the planet is a whole other discussion. Finally, this is a new perspective on tourism studies and while I write these final words, the feeling is that this work is just beginning.

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APPENDIX

ROTEIRO DE ENTREVISTAS (INTERVIEW SCRIPT) – IBAMA**Data/Date:****Função/Occupation:**

1. *Quando a sede do IBAMA no Ceará iniciou suas atividades? (When did the IBAMA headquarters in Ceará start its activities?)*
2. *Qual o efetivo do IBAMA/CE e a quantidade de fiscais ambientais no Estado do Ceará? (What is the number of people working in IBAMA/CE and the number of environmental inspectors in the State of Ceará?)*
3. *Quais as principais dificuldades no exercício da fiscalização ambiental por parte do IBAMA? (What are the main difficulties in the exercise of environmental inspection by IBAMA?)*
4. *Na sua opinião a atual legislação ambiental brasileira é adequada para o combate ao crime ambiental? (In your opinion, is the current Brazilian environmental legislation adequate to combat environmental crime?)*
5. *Na sua opinião quais os principais avanços e retrocessos da legislação ambiental federal face ao combate aos crimes ambientais nas últimas duas décadas? (In your opinion, what are the main advances and setbacks of federal environmental legislation in relation to environmental crime law enforcement in the last two decades?)*
6. *Como é realizada a cooperação federativa no Estado do Ceará no que se refere ao processo de fiscalização das infrações ambientais? (How is federative cooperation carried out in the State of Ceará regarding the inspection process of environmental infractions?)*
7. *A Lei Complementar 140 minimizou os problemas ocasionados pela competência comum dos entes federados? (Did Complementary Law 140 minimize the problems caused by the common competence of the federative entities?)*
8. *Como ocorre o processo de fiscalização ambiental pela IBAMA? (How does the environmental inspection process by IBAMA occur?)*
9. *Qual o procedimento após uma empresa/pessoa ser autuada pela IBAMA? (What is the procedure after a company/person is assessed by IBAMA?)*

10. *É possível identificar alguma razão por que determinados municípios tem uma maior quantidade de autos de infração que outros?* (Is it possible to identify any reason why certain municipalities have a greater number of infraction notices than others?)

11. *Durante a análise dos autos de infrações (no Estado do Ceará) foi percebido um aumento considerável na quantidade de autos no ano de 1996. Existe alguma razão para esse aumento?* (During the analysis of the infraction notices (in the State of Ceará), a considerable increase in the number of notices was noticed in 1996. Is there any reason for this increase?)

12. *Durante a análise dos autos de infrações (no Estado do Ceará) foi percebido uma queda considerável na quantidade de autos nos anos de 2000, 2011 e 2016. Existe alguma razão para essas quedas?* (During the analysis of the infraction notices (in the State of Ceará), a considerable drop was noticed in the number of notices in the years 2000, 2011 and 2016. Is there any reason for these drops?)

13. *Foram identificadas diversas divergências referentes ao nome dos infratores nos diferentes bancos de dados relacionados aos autos de infração do IBAMA. Qual a razão dessas divergências? É preferível emitir o auto no CNPJ da empresa ou no CPF do proprietário?* (Several discrepancies were identified regarding the name of the violators in the different databases related to the infraction notices issued by IBAMA. What is the reason for these discrepancies? Is it preferable to issue the infraction notice in the company's CNPJ or in the owner's CPF?)

14. *Também foram identificadas diversas duplicidades nos autos de infração, com divergência no status do débito. Qual a razão dessas divergências?* (Several duplicities were also identified in the infraction notices, with divergence in the debt status. What is the reason for these discrepancies?)

15. *Foi identificado que a maioria das infrações a partir de 2014 possuem sua descrição como 'não classificadas', diferente dos outros anos que identifica a descrição da infração. Qual a razão dessa mudança?* (It was identified that most infractions from 2014 onwards have their description as 'unclassified', unlike other years that identify the description of the infraction. What is the reason for this change?)

16. *É possível identificar alguma razão por que determinados municípios tem uma maior quantidade de autos de infração que outros?* (Is it possible to identify any reason why certain municipalities have a greater number of infraction notices than others?)

17. *Como o valor arrecado com as multas é utilizado?* (How is the amount collected from the fines used?)
18. *Quais as ações realizadas para a compensação ambiental dos ambientes degradados?* (What actions are taken to compensate for degraded environments?)
19. *Qual a relação entre a indústria do turismo e os crimes ambientais?* (What is the relationship between the tourism industry and environmental crimes?)
20. *De acordo com a análise dos autos foi identificado que a maior parte das infrações relacionadas ao turismo se refere a falta de licenciamento e ao comércio ilegal de pescado. Quais os danos e consequências dessas infrações para o ecossistema e as comunidades do entorno?* (According to the analysis of the records, it was identified that most of the infractions related to tourism refer to the lack of licensing and the illegal fishery trade. What are the damages and consequences of these infractions for the ecosystem and surrounding communities?)

ROTEIRO DE ENTREVISTAS (INTERVIEW SCRIPT) – IMAC

Data/Date:

Função/Occupation:

1. *Quando o IMAC iniciou suas atividades? (When did IMAC start its activities?)*
2. *Qual o efetivo do IMAC e a quantidade de fiscais ambientais? (What is the number of people working at IMAC and the number of environmental inspectors?)*
3. *Quais as atividades exercidas pelo IMAC? (What are the activities carried out by IMAC?)*
4. *Como ocorre o processo de fiscalização ambiental pela IMAC? (How does the environmental inspection process by IMAC occur?)*
5. *Quais as principais dificuldades no exercício da fiscalização ambiental por parte da IMAC? (What are the main difficulties in the exercise of environmental inspection by IMAC?)*
6. *Existe algum banco de dados do IMAC disponível referentes aos autos de infração ambiental? (Is there an IMAC database available regarding environmental infraction notices?)*
7. *Qual o procedimento após uma empresa/pessoa ser autuada pela IMAC? (What is the procedure after a company/person is assessed by IMAC?)*
8. *Qual a relação entre o turismo e os crimes ambientais? (What is the relationship between tourism and environmental crimes?)*
9. *Existe alguma ação do IMAC para combater o avanço das construções no parque de dunas do Cumbuco e Cauípe? (Is there any IMAC action to combat the advance of construction in the Cumbuco and Cauípe dune park?)*
10. *Existe alguma ação do IMAC junto à Secretaria de Cultura e Turismo de Caucaia? (Is there any IMAC action with the Department of Culture and Tourism of Caucaia?)*

ROTEIRO DE ENTREVISTAS (INTERVIEW SCRIPT) – SEMACE

Data/Date:

Função/Occupation:

1. *Quando a SEMACE iniciou suas atividades no Ceará?* (When did SEMACE start its activities in Ceará?)
2. *Qual o efetivo da SEMACE e a quantidade de fiscais ambientais?* (What is the number of people working at SEMACE and the number of environmental inspectors?)
3. *Quais as principais dificuldades no exercício da fiscalização ambiental por parte da SEMACE?* (What are the main difficulties in the exercise of environmental inspection by SEMACE?)
4. *Na sua opinião a atual legislação ambiental brasileira é adequada para o combate ao crime ambiental?* (In your opinion, is the current Brazilian environmental legislation adequate to combat environmental crime?)
5. *Na sua opinião quais os principais avanços e retrocessos da legislação ambiental federal face ao combate aos crimes ambientais nas últimas duas décadas?* (In your opinion, what are the main advances and setbacks of federal environmental legislation in relation to the fight against environmental crimes in the last two decades?)
6. *Como é realizada a cooperação federativa no Estado do Ceará no que se refere ao processo de fiscalização das infrações ambientais?* (How is federative cooperation carried out in the State of Ceará with regard to the inspection process of environmental infractions?)
7. *A Lei Complementar 140 minimizou os problemas ocasionados pela competência comum dos entes federados?* (Did Complementary Law 140 minimize the problems caused by the common competence of the federated entities?)
8. *Como ocorre o processo de fiscalização ambiental pela SEMACE?* (How does SEMACE's environmental inspection process take place?)
9. *Qual o procedimento após uma empresa/pessoa ser autuada pela SEMACE?* (What is the procedure after a company/person is fined by SEMACE?)
10. *Qual a relação entre a indústria do turismo e os crimes ambientais?* (What is the relationship between the tourism industry and environmental crimes?)

11. *É possível identificar alguma razão por que determinados municípios tem uma maior quantidade de autos de infração que outros?* (Is it possible to identify any reason why certain municipalities have a greater number of infraction notices than others?)
12. *Durante a análise dos autos de infrações foi percebido diminuição na quantidade de autos a partir de 2018. Existe alguma causa para essa diminuição?* (During the analysis of the infraction notices, a decrease in the number of notices was noticed from 2018. Is there any cause for this decrease?)
13. *Por que só existe dados referente aos autos de infração disponíveis a partir de 2012?* (Why is there only data on infraction notices available from 2012 onwards?)
14. *É preferível emitir o auto no CNPJ da empresa ou no CPF do proprietário?* (Is it preferable to issue the infraction notice in the company's CNPJ or in the owner's CPF?)
15. *Foi identificado a emissão de multas entre 2012 e 2018 no valor total de R\$85.360.751,34. Qual o valor total quitado correspondente a essas multas? Há algum sistema disponível de acesso ao público?* (It was identified that the fines issued between 2012 and 2018 is equivalent to a total of BRL85,360,751.34. What is the total amount paid of these fines? Is there a public access system available?)
16. *Como o valor arrecado com as multas é utilizado?* (How is the amount collected from the fines used?)
17. *Quais as ações realizadas para a compensação ambiental dos ambientes degradados?* (What actions are taken to compensate for degraded environments?)
18. *De acordo com a análise dos autos foi identificado que a maior parte das infrações relacionadas ao turismo se refere a falta de licenciamento? Quais os danos e consequências dessas infrações para o ecossistema e as comunidades do entorno?* (According to the analysis of the records, it was identified that most of the infractions related to tourism refer to the lack of licensing. What are the damages and consequences of these infractions for the ecosystem and surrounding communities?)

ROTEIRO DE ENTREVISTAS (INTERVIEW SCRIPT)- MPCE

Data/Date:

Função/Occupation:

1. *Qual o ano de criação do MPCE?* (What year was MPCE created?)
2. *Qual o efetivo da MPCE?* (What is the number of people working at the MPCE?)
3. *Quais as atividades exercidas pelo MPCE em relação ao meio ambiente?* (What are the activities carried out by MPCE regarding the natural environment?)
4. *Existe algum banco de dados do MPCE disponível referentes a processos, ações judiciais ou denúncias de crimes ambientais?* (Is there any MPCE database available regarding lawsuits, or public reports of environmental crimes?)
5. *Na sua opinião a atual legislação ambiental brasileira é adequada para o combate ao crime ambiental?* (In your opinion, is the current Brazilian environmental legislation adequate to combat environmental crime?)
6. *Na sua opinião quais os principais avanços e retrocessos da legislação ambiental face ao combate aos crimes ambientais nas últimas décadas?* (In your opinion, what are the main advances and setbacks of federal environmental legislation in relation to the fight against environmental crimes in the last decades?)
7. *Qual a relação entre a indústria do turismo e os crimes ambientais?* (What is the relationship between the tourism industry and environmental crimes?)