

Does tourism policy consider climate? Exploring rainy season narratives on the Alagoas coast, Brazil

Briana Bombana ^I
Ivan Machado Martins ^{II}
Juliana de Carvalho Gaeta ^{III}

Marcos Paulo Santos Pereira ^{IV}
Iran Campello Normande ^V
Aline da Silva Cerqueira ^{VI}

Abstract: This study aims to expand the discussion regarding the extent to which tourism can address socioeconomic expectations. Like other coastal regions, the state of Alagoas has prioritised tourism promotion, despite facing a rainy season that hinders its primary form of tourism, known as Sea, Sun and Sand tourism. We have based our assessment on climate and weather. Through various sources, we have identified narratives related to the rainy season. When crossing these narratives with the Alagoas Strategic Plan for Tourism Development 2013-2023, our findings revealed that the state's policy inadequately addresses the impact of the rainy season. Consequently, we have proposed some recommendations to better align with current local-regional constraints and demands. Beyond the scope of this work, our narrative approach has proven valuable in expanding the consideration of values and meanings within the framework of public policy development, potentially fostering a more holistic understanding of the environment-society relationship.

Keywords: Public policies, narratives, climate and weather, 3S tourism, Alagoas

São Paulo. Vol. 27, 2024

Original Article

DOI: <http://dx.doi.org/10.1590/1809-4422asoc0108r1vu27L2OA>

^I Grup de Recerca en Recursos Costaners i Marins, Territoris, Paisatges i Migracions (INTER-FASE), Departament de Geografia, Universitat Autònoma de Barcelona, Cerdanyola del Vallès, Espanya. Núcleo Transdisciplinar de Meio Ambiente e Desenvolvimento (NMD), Universidade Federal de Santa Catarina, Florianópolis, Brasil.

^{II} Instituto do Mar, Universidade Federal de São Paulo, Santos (SP), Brasil.

^{III} Fundação Cearense de Apoio ao Desenvolvimento Científico e Tecnológico, Fortaleza (CE), Brasil.

^{IV} Instituto Ayni, Brasil, Instituto de Ciências Atmosféricas, Universidade Federal de Alagoas, Maceió (AL), Brasil.

^V Instituto Chico Mendes de Conservação da Biodiversidade (ICMBIO), Reserva Extrativista Marinha da Lagoa de Jequiá, Jequiá da Praia (AL), Brasil; Instituto de Ciências Biológicas e da Saúde, Universidade Federal de Alagoas, Maceió (AL), Brasil.

^{VI} King's College London, London, United Kingdom; Institute of Zoology of the Zoological Society of London, London, United Kingdom.

Introduction

Since the 1950s, socioeconomic trends have seen rapid growth, resulting in diverse impacts on society and the environment across local and planetary scales (STEFFEN *et al.*, 2015). A significant connection between human activities and environmental conditions has been underscored, prompting discussions on the need to consider the biophysical characteristics and limits of the planet when discussing economic dynamics. This contrasts with the traditional economy heavily rooted in a free market, as highlighted by Vieira and Sampaio (2022). The prevailing approach to development planning continues to prioritise economic growth, often overlooking the interconnections with Earth system cycles and processes (VIEIRA, 2019). This disparity persists even in the face of recommendations for market governance and regulations.

Tourism is a globally recognised economic sector, known for its rapid growth (SUBRAMANIAM; MASRON, 2021). It plays a pivotal role in the socioeconomic development of many developing countries, particularly benefiting low-income communities by supporting existing livelihoods and providing employment opportunities (INCERA; FERNÁNDEZ, 2015). Tourism relies on local and regional natural resources, including landscapes, seascapes, and weather conditions (BUZINDE *et al.*, 2010). Climate and weather are particularly significant factors for tourism, influencing destination choice (YU *et al.*, 2021), season length and quality (RUTTY; SCOTT, 2016), and overall expenditures (WILKINS *et al.*, 2018). Sea, Sun, and Sand tourism (3S tourism) revolves around seaside attributes and is notably dependent upon climate and weather (YU *et al.*, 2021). It is mostly driven by intra- and inter-regional travel flows, which affect visitor numbers (IBARRA, 2011). However, 3S tourism faces climate-driven threats, including sea level rise, changes in precipitation and storm surges patterns, extreme temperatures, all of which are expected to increase due to climate change (IPCC, 2022; MORENO; BECKEN, 2009).

In Alagoas, a state located on the northeast coast of Brazil, 3S tourism is a significant economic activity (ARAÚJO; CARVALHO, 2013), despite the presence of an annual rainy season which climatologically lasts approximately three months and limits its year-round potential. Notwithstanding, tourism has been on the rise in Alagoas in recent years (SILVA; JUNKES, 2020), attributed in part to government initiatives aiming at establishing a strong presence in the Brazilian tourism market alongside other well-established economic activities (ALVES *et al.*, 2018). To foster and regulate tourism activities, the State government created a Strategic Plan for Tourism Development 2013-2023 (SPTD) aiming to lay the groundwork for regional, municipal, and local tourism plans (ALAGOAS, 2013).

The prioritisation of tourism in Alagoas is driven by the belief that it can boost the State's economy and address socioeconomic challenges, e.g., Alagoas has the lowest Human Development Index in Brazil (ALVES *et al.*, 2018). On the other hand, the growth of tourism, along with coastal urbanisation and overfishing, has had a negative impact on the region's coastal assets and communities that rely on natural resources. Paradoxically, fishing communities view tourism as a supplementary source of income, especially during

fishery shortages, enabling them to remain attached to their territories (ANDRADE, 2020; LAPOINTE *et al.*, 2021). Tourism, therefore, serve as an alternative livelihood. However, there is a need for further analysis regarding the extent to which it can meet the socioeconomic expectations of Alagoas' society. This issue has faced criticism from socioeconomic, cultural, and environmental perspectives (MARTINS; MARTINS, 2011; ALVES *et al.*, 2018).

Storytelling about experiences and relationships within the surrounding environment can be a useful tool for tourism planning, as it helps guide actions toward desired results (PASCHEN; ISON, 2014; MOEZZI *et al.*, 2017). Narratives express points of view and corresponding meanings through words, demonstrating how public preferences can be considered in designing and implementing public policies, setting specific objectives, targets, and related tools (ALLEN; GIAMPIETRO, 2006). This, in turn, enhances management relevance and adaptability (BOMBANA *et al.*, 2021). This work focuses on the limitations associated with tourism in Alagoas, particularly regarding the local climate and weather patterns. We investigated narratives about the rainy season on the coast of Alagoas, considering the context of climate change, to understand various perspectives on how the rainy season is perceived. Subsequently, we evaluated whether and how the rainy season is addressed in the State's Strategic Plan for Tourism Development 2013-2023 (SPTD). We provided recommendations to align current policy with local-regional constraints, demands, and opportunities. This analytical approach is considered innovative in the tourism field and holds significant relevance for the adaptation of sector-oriented public policies (TORRES-DELGADO; LÓPEZ PALOMEQUE, 2012).

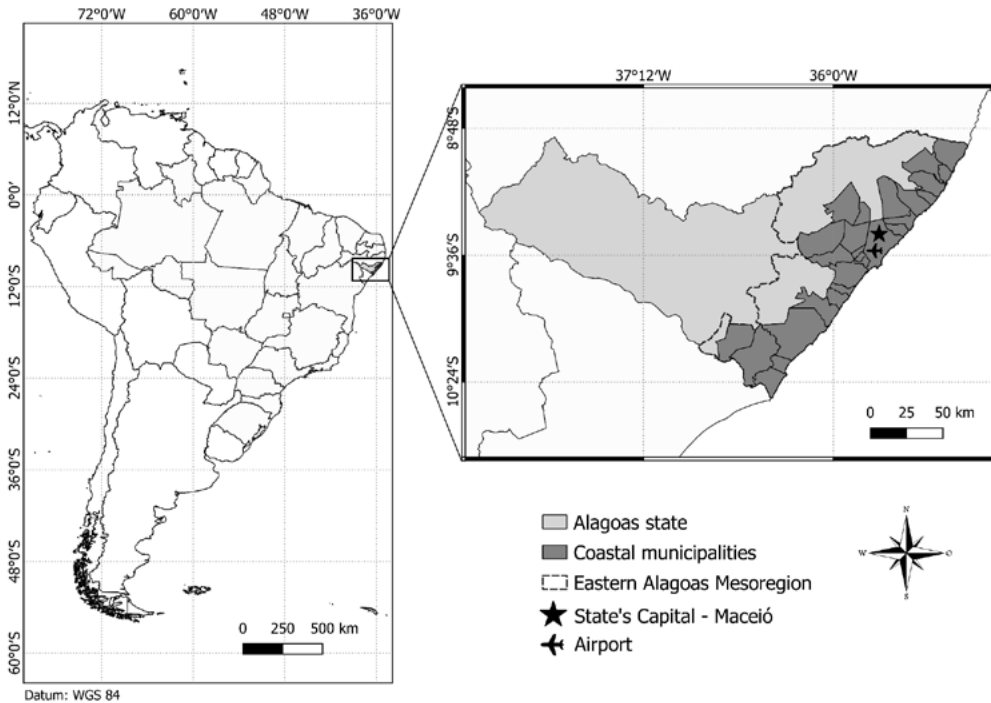
Material and methods

Study Area

Alagoas, situated on the north-eastern coast of Brazil, experiences a semi-arid climate in the inland portion and tropical climate in the eastern mesoregion of Alagoas (EMRA), which roughly corresponds to the state's coastal zone (MEDEIROS *et al.*, 2021). The highest levels of rainfall in the State are recorded in the EMRA with a mean annual precipitation exceeding 1000 mm and a climatological rainy season typically spanning from May to July (MEDEIROS *et al.*, 2021).

This study focused on the EMRA region, which includes 27 coastal municipalities (MMA, 2021) (Figure 1) and 2 protected areas: *APA Costa dos Corais* and *RESEX Jequiá*. Historical and cultural aspects of this area, combined with the diverse natural coastal landscapes, as sandy beaches, coral and sandstone reefs, coastal lagoons, rivers, and mangrove ecosystems, make the coastline of Alagoas an important tourist destination in Brazil (ALAGOAS, 2013).

Figure 1 - The Eastern Mesoregion of Alagoas including 27 coastal municipalities highlighted in dark grey.



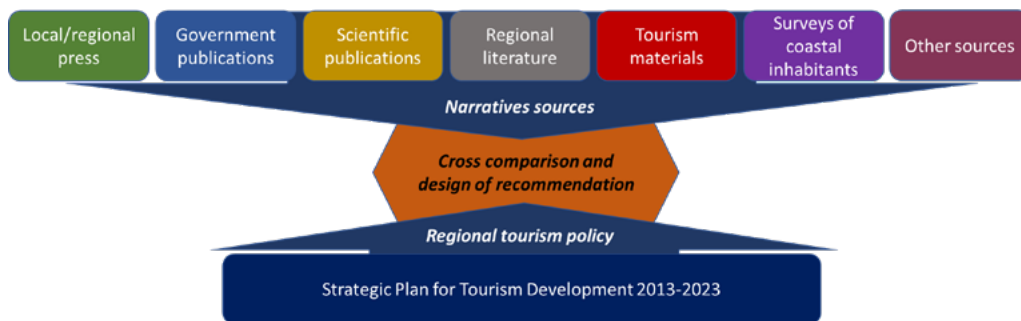
Source: Ravena S.A. Nogueira, 2021.

The Alagoas coastline can be divided into four tourism regions: Metropolitana, Costa dos Corais and Lagoas, Mares do Sul and Caminhos do São Francisco (ARAÚJO; CARVALHO, 2013). Given the significant dependency of 3S tourism on climatic conditions (SANTOS-LACUEVA *et al.*, 2017), it is anticipated that a majority of tourists will visit Alagoas during the austral summer months (late December to March). This period traditionally experiences low rainfall and aligns with standard Brazilian Summer vacation.

Tourism policy through the narratives of the rainy season

The present analysis followed three main steps (Figure 2): 1) Narratives construction and classification, 2) Cross comparison between Alagoas' SPTD and narratives, and 3) Recommendations for future policies based on the findings of steps 1 and 2.

Figure 2 - Main analysis framework and narrative sources.



Source: The authors.

Narratives construction and classification

Narratives regarding the rainy season in Alagoas' coast were sourced from various outlets, including the local and regional press, tourism promotional materials, government publications and websites, peer-reviewed articles, and online surveys targeting coastal inhabitants. We employed specific terms that acted as indicators of the rainy season or the absence of rain to identify relevant narratives within the analysed sources (e.g., rain, rainy season, precipitation, extreme weather events, flood, sun, drought, summer, winter, and climate change).

Due to COVID-19 restrictions, we were unable to conduct in-person interviews. Instead, we created an online survey using Google Forms that was shared with coastal inhabitants of Alagoas through social media platforms (WhatsApp and Twitter) between October and November 2021. Besides a consent form that respondents were required to read and sign before starting the survey¹, it included structured and semi-structured questions designed to characterise their roles in the communities, how the weather and climate influenced their livelihoods and whether they perceived changes in the typical rainy season pattern.

Following an initial textual analysis based on the aforementioned information sources, we implemented a classification framework for rainy season narratives using Bremer (2018) and Krauß *et al.* (2018) as references. The resulting narrative typologies were not mutually exclusive; thus, a single source could contain one or more narratives. Based on that, our analysis identified six main narrative categories:

1. Promotional: aimed at attracting visitors and business;
2. Identity-related: local and regional historical accounts providing insights into perceptions, relationships with the environment, and, importantly, constructions of a place and its people at a particular point in time;

1 - Ethics code referee number through Plataforma Brasil (CAAE): 56051922.0.0000.0039, and SISBIO: 80999-1.

3. Romantic: the beauty and mystique of natural landscape, often found in literature;
4. Science-based: scientific and academic accounts and facts;
5. Today's weather and extreme weather events: accounts detailing current weather phenomena and impacts on the community;
6. Climate change: science-informed narratives that often incorporate moral or ethical elements.

Rainy season narratives, regional tourism policy and recommendations

The SPTD was designed to guide the actions of Alagoas Secretary of State for Tourism (SEDETUR), a state department that works in collaboration with other government offices and levels. With the objective of strengthening decentralised management, the SPTD aims to encourage multi-level tourism development within the State, building policies that must be agreed upon through participatory processes that involve members of the State Tourist Forum (ALAGOAS, 2013).

We conducted a textual analysis of the SPTD to identify discourses, arguments, and conceptualisations related to climate and weather. We aimed to determine whether these topics were considered urgent matters and to understand the reasons behind such assessments (SANTOS-LACUEVA *et al.*, 2017). The relevant sections of the SPTD (Table 1) were crosschecked and compared with the narratives identified in step 1. We aimed to assess how the rainy season was addressed in the policy, considering climate change as either a threat or an opportunity for tourism activities. By consolidating this analysis, we derived recommendations for future policies aligned with local climate and weather characteristics, as well as the ongoing climate crisis debate.

Table 1 - Description of SPTD contents concerning the Alagoas coastal zone.

Guidelines	Objectives	Goals	Programmes	Tourism on the coastal zone*
<p>I - Employment and entrepreneurship opportunities;</p> <p>II - Participation and dialogue with society;</p> <p>III - Innovation and knowledge;</p> <p>IV - Municipalisation and regionalisation of tourism as structuring programme.</p>	<p>I - Prepare Alagoas tourism for national and international visitors;</p> <p>II - Encourage people from Alagoas, nationals and foreigners to travel to the State; and</p> <p>III - Improve the quality and increase the competitiveness of tourist destinations, reinforcing the roles of municipal management and regional governance bodies, strengthening the State Tourism Forum and its Collegiate.</p>	<p>I - To enhance tourism by attracting more national and international visitors to Alagoas;</p> <p>II - To increase revenue from tourism;</p> <p>III - To boost the frequency of domestic travel;</p> <p>IV - To encourage investment in the tourism sector and enhance the quality of tourist products;</p> <p>V - To support the standardisation and certification of equipment and tourism service providers;</p> <p>VI - To raise the average index of tourism competitiveness of tourist destinations within the State, consolidating the municipalisation and regionalisation of tourism as main tourism policy;</p> <p>VII - To expand the tourism sector within the State.</p>	<p>I - Municipalisation and regionalisation;</p> <p>II - Organisation and structuring of tourist offers;</p> <p>III - Qualification of tourist products;</p> <p>IV - Diversification and competitiveness of tourist offers;</p> <p>V - Environment;</p> <p>VI - Standardisation and certification;</p> <p>VII - Promotion, marketing and communication to prepare the tourism sector in Alagoas for national and international visitors, to stimulate travel through the State and improve the quality and competitiveness of its tourist destinations.</p>	<p>I - 3S tourism, as well as cultural, historical, adventure, social and nautical segments are observed in all coastal tourist regions. Except for the <i>Metropolitana</i> region, ecotourism is also widely acknowledged. Other segments are present in two or less coastal tourist regions, i.e., business and events, and religious and rural tourism;</p> <p>II - Natural, cultural and historical potentialities are observed, besides popular expressions and handicraft. Examples of natural assets are beaches, dunes, coral reefs, cliffs, marine biodiversity, lagoons, natural pools, mangroves, and Atlantic forest. While historical and cultural attractions are artistic heritage, European colonisation architecture, archaeological sites, artisanal fishing and gastronomy;</p> <p>III - The variety of assets enable several activities, such as diving (also in shipwrecks), visitation of protected areas and manatee centre, and cultural or religious festivals.</p>

*SPTD tourist regions encompassing the coastal region: *Metropolitana, Costa dos Corais, Lagoas e Mares do Sul* and *Caminhos do São Francisco*

Source: Adapted from Alagoas, 2013.

Results

Narratives about the rainy season on the coast of Alagoas

The narratives analysed in this study were sourced from different outlets, representing the diverse range of values and interpretations associated with the rainy season along the coast of Alagoas. These narratives were classified into six broad categories based on their primary message: promotional, identity-related, romantic, science-based, today's weather and extreme weather events, and climate change. These categories were subdivided into nine sub-categories, each expressing specific meanings: absence of a rainy season, coastal identity, salvation, recreation and satisfaction, scientific reasoning, a period of losses, a period of earnings, a period of disasters and changes in rainy season, as described in Table 2.

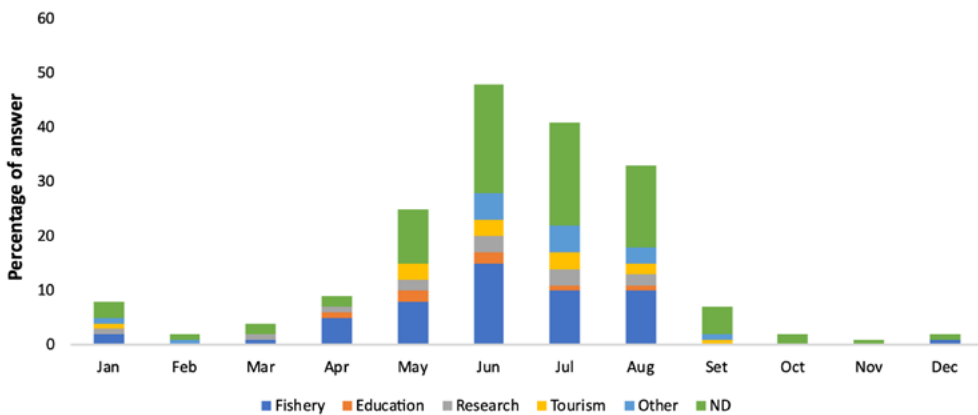
Some narratives about the rainy season were associated with recreation, satisfaction, and a better life by the locals. They likely held sentimental attachments to this weather period, associating their identities with Alagoas' coastal region. Rain was also tied to economic and ecological benefits and losses. On one hand, it led to an increase in biological productivity, but on the other hand, it resulted in reduced fishing and tourism activities, as well as the accumulation of litter and sewage. In scientific narratives, the rainy season provided fundamental information used to determine weather and climate patterns and define the summer and winter seasons for the State. However, promotional sources omitted information and perceptions associated with rainy weather, likely to avoid discouraging potential tourists from visiting Alagoas. Narratives about natural disasters associated with rain described floods, landslides, and the loss of properties and/or lives. Furthermore, there were reports of changes in the rainy season and other extreme weather events, aligning with broader climate change narratives.

Table 2 - Narratives about the rainy season on the coast of Alagoas, including categories, sub-categories, descriptions, and sources.

Category	Sub-category	Description	Source
Promotional	Absence of rainy season	Websites that promote tourism in the state omit the existence of the rainy season.	TURISMO ALAGOAS (2021); SEDETUR (2021).
Identity-related	Coastal Identity	The word Alagoas comes from the Latin <i>lacus</i> , which means lakes and lagoons. Water is therefore central to the State's identity. Contrasts in climate and weather patterns between the coastal and inland regions of the State influence the identities of their inhabitants and the way they perceive the rainy season.	Wikipedia article on Alagoas.
	Salvation	In the book <i>Vidas Secas</i> of 1938 (published in English as <i>Barren Lives</i>), a novel by Graciliano Ramos, rain is regarded by the characters as "salvation". <i>Vidas Secas</i> is considered to be the most representative novel about the people of Alagoas and Northeast of Brazil. In the book, rain brings hope for the drought-stricken people of the semi-arid region: " <i>The sunset was covered with cirrus - and a crazy joy filled Fabiano's heart</i> ".	Novel by Graciliano Ramos, XX century, Brazilian literature.
Romantic	Recreation and satisfaction	Some people enjoy playing in the rain and take advantage of rainwater to water their plants: " <i>Many people place their plants outside to catch the good energy of the rain... I run a lot in the rain just for the fun of it</i> ".	Coastal communities survey.
Science-based	Scientific reasoning	The east coast of Alagoas presents significantly higher precipitation rate compared to other areas in the State. In the Köppen climate classification system, this area is classified as " <i>As: Tropical savanna climate with dry-summer characteristics</i> ", with seasons determined according to rain periodicity.	LYRA <i>et al.</i> (2017).
Today's weather and extreme weather events	A period of losses	There is a decrease in economic activities, such as tourism, during the rainy season, perceived as not being attractive to tourists: " <i>Rough and cloudy sea, jellyfish and caravel, a lot of sargassum, low tourism, decreased income</i> ". Rain often carries waste to coastal areas, leading to increased pollution and water turbidity: " <i>A lot of garbage comes down...</i> ".	Coastal communities survey.
	A period of earnings	The rainy season is a period of ecological fertility when vegetation thrives, and it also attracts certain fish species to local waters: " <i>Great period of fish abundance</i> ".	Coastal communities survey.
	A period of disasters	Rain can lead to flooding, landslides, and other hazards, which can negatively impact both properties and human lives: " <i>It reminds me of collapsing coastal cliffs and floods in the lagoon region</i> ".	Coastal communities survey; CEPED/UFSC (2013); local/regional press.
Climate change	Changes in rainy season	Changes in the local rainy season patterns have been observed and attributed to environmental changes: " <i>...the rainy season has changed a lot, I think people are clearing the forests, then it rains less</i> ".	Coastal communities survey; PEREIRA <i>et al.</i> (in prep.).

The coastal communities online survey garnered responses from 55 participants. Of these, 17 were employed in the fisheries sector, 3 in tourism, 2 in education, 3 in scientific research, and 6 in other sectors. Additionally, 24 respondents opted not to disclose their occupation. Their responses provided valuable insights into their perceptions of the rainy season, the impacts of weather and climate on their livelihoods, and whether they had observed changes in the patterns of the rainy season. According to the participants, May, June, July, and August constitute the rainy season. A significant majority of respondents (73.6%) reported having observed changes in the rainy season over the years (Figure 3).

Figure 3 - Months with highest rainfall on the coast of Alagoas according to the perception of local inhabitants from different professional sectors.



Source: The authors.

Is Alagoas' tourism planning taking weather and climate into consideration?

Within the SPTD, planning is seen as a means to ensure the full expression of benefits and outcomes facilitated by tourism. Consequently, the framework was created to provide clear guidelines for strategic programmes and embedded actions. Integration with other policy areas is acknowledged in the SPTD; however, it is somewhat limited, particularly concerning the environment, which is covered by *Programme 5 – Environment*. Nonetheless, according to the Brazilian Environmental Policy (BRASIL, 1981), environmental and tourism development guidelines should be intertwined to ensure the environmental quality of tourist regions in the State and the effective implementation of protected areas.

Natural resources and processes, including climate and weather, play limited functional roles in the SPTD and are viewed primarily as factors that either support or hinder tourism. For example, climate is considered a tourism attraction and a crucial factor in driving tourism development at a destination. Alagoas' "high environmental vulnerability" is mentioned in the document and attributed to natural fragility and spe-

cific developmental factors, such as historical practices of the sugarcane industry and the advance of unplanned urban infrastructure on beaches and associated coastal vegetation.

After cross-checking the SPTD with the identified narratives, it becomes evident that climate and weather are not carefully considered in tourism planning, despite their fundamental importance to 3S tourism and related segments. The “Absence of a rainy season” narrative was indirectly inferred from the SPTD, although repeatedly, as the words “rain” and “rainy” were neither mentioned nor implied, as opposed to the word “sun” which was stated over 20 times. However, the SPTD did mention a natural asset associated with rain (e.g., “várzea” or flood plain), timidly denoting elements of a coastal “Identity-related” narrative that depends on a wet period. Furthermore, climate and weather were not perceived as urgent matters, at least not in the judgement of those involved in the document development. Therefore, the SPTD did not assess or provided guidance on climate and weather in terms of the opportunities and challenges they represent for the sector. Yet, 3S tourism is featured as the main policy branch in the SPTD, and policy efforts are maximised for this segment.

The SPTD also draws upon expanding the scope of tourism by encouraging diversification and competitiveness through exploring existing opportunities. This focus is seen in *Programme 4 - Diversification and Competitiveness of Tourist Offer*.

Discussion

Despite the multiplicity of narratives about the rainy season on the coast of Alagoas, only two of them have indirectly influenced the SPTD and subsequent tourism actions and strategies: “Absence of a rainy season” and, more timidly, “Identity-related”. Generally, the rainy period is perceived as a hindrance to tourism development, especially in the context of 3S tourism and related activities. The deliberate omission of information regarding the existence of a rainy season in a coastal holiday resort appears to be a strategy to dissuade tourists from not choosing Alagoas as a destination, as observed in other locations (e.g., BREMER, 2018). Existing policy goals for tourism in Alagoas, rather than incorporating important biogeographic characteristics that would help stakeholders produce useful and tailored actions, are instead out of touch with natural phenomena, particularly in relation to climate and weather. Consequently, this short-sightedness leaves users unprepared to address pressing contemporary concerns like climate change (SCOTT *et al.*, 2008).

Other narratives indicate alternative ways of looking at the rainy season. First, this period is recognised as a factual occurrence in Alagoas (i.e., “Scientific reasoning”). Therefore, it should be factored into all actions dependent on weather and climate conditions, including tourism and fisheries planning. Moreover, climate change defies planners to increase adaptation capabilities, given that its effects present emergent characteristics (KAUFFMAN; HILL, 2021). The “Changes in the rainy season” narrative suggests that climate change is likely to modify rainfall patterns and associated disasters, potentially affecting tourism development, among other impacts. Climatologically, the rainy season on the coast of Alagoas typically spans from May to July; however, this pattern can be influenced by interannual variability in sea surface temperature (SST). Other observed

rainy periods in the region include March to May; April to June; and June to August (PEREIRA *et al.*, *under review*). A rain forecast model, utilising 39 years of meteorological data (1982-2021), revealed that in the last six years, four rainy seasons occurred in March to May. This result could be an indication that the rainy season is shifting to the beginning of the year as an effect of climate change or coastal variability (PEREIRA *et al.*, *in prep.*), getting closer to the summer holiday period.

Regardless of the time of year, the rainy season is also valued as something positive, depending on the situation or the person experiencing it (narratives of “Recreation and satisfaction”, “Salvation”, and “A period of earnings”). Some monsoon-prone countries, for example, have embraced ‘monsoon tourism’, capitalising on the benefits of this season, such as lower temperatures, reduced crowds, and more affordable accommodations. These benefits are combined with various forms of entertainments, like musical events, flower exhibitions, and gastronomy (CHOWDHURY; KASEM, 2014; TRIHN, 2020). Additionally, the advantages of the rainy season concerning biological and ecosystem productivity have been emphasised in studies (COSTA *et al.*, 2011; SOUZA *et al.*, 2018) and are supported by the narrative of “A period of earnings”. Costa *et al.* (2011) noted that precipitation is the main factor influencing the composition, density, biomass, and diversity of the phytoplankton community. Another study linked higher fish diversity, abundance, capture per unit of effort, and mean species length with the rainy season (SOUZA *et al.*, 2018). Fishers’ perceptions in Southeast Brazil align with the narratives in this study, suggesting that the rainy season is more productive and leads to better catches (MARTINS; GASALLA, 2018). On the flip side, the rainy season can also be challenging for fishers due to a greater occurrence of storms, consequently limiting fishing trips (MARTINS; GASALLA, 2018), similar to the narratives of “A period of losses” and “A period of disasters”.

While this work acknowledges the seasonality of 3S tourism and its vulnerability to climate change, the SPTD tends to overlook these critical themes. We recognise that climate, weather, and environmental vulnerability are not the primary focus of tourism planning. However, the absence of consideration for these components suggests a narrow appreciation of current sectorial issues. Given that tourism, especially 3S tourism, heavily relies on climate and weather, it is essential to acknowledge these factors. Addressing them is vital to develop contextually appropriate actions that align with local-regional fluctuations and limitations (SANTOS-LACUEVA *et al.*, 2017). Utilising tourist perception surveys, common in the tourism management field, could help to design such actions. These surveys should include climate and weather-related questions, as well as insights into tourists’ preferences and behaviour in current and potential situations (e.g., BOMBANA *et al.*, 2023).

Above all, planning efforts should acknowledge interannual seasonality to adapt strategies that support people and businesses throughout the year, especially if the government of Alagoas is committed to improving the State’s socioeconomic indicators and livelihoods (ALVES *et al.*, 2018). It is worth reflecting on the confidence placed in tourism, particularly 3S tourism, as a means to achieve such improvement. This confidence is not

only held by the SPTD but also evidenced by recent State investments. For instance, a significant portion of Alagoas' lines of credit for individuals is directed toward services associated with tourism (DESENVOLVE ALAGOAS, n.d.). The so-called social benefits of tourism represent a key area for debate. Some dissenting voices have demonstrated that current practices tend to maintain income concentration, especially through the implementation of low or informal salaries, often without any legal employment guarantees (ALVES *et al.*, 2018). Likewise, negative environmental and cultural impacts, such as the destruction of traditional lifestyle and identities, caused by tourism homogenising processes that distort landscapes and disregard spaces as primary living place for inhabitants, limit its positive effects (MARTINS; MARTINS, 2011). Furthermore, to tackle problems arising from the increasingly complex socioeconomic reality of Alagoas and propose economic alternatives to partially deal with them, efforts to integrate tourism with other policies are needed. Santos-Lacueva *et al.* (2017) argue that beyond dealing with traditional practices and assumptions that curb the inclusion of new issues into the classical agenda, it is also important to consider cross-sectorality when developing and implementing tourism policy.

Narratives possess the power to encourage reflection, establish institutions, and prompt actions that can be translated into management plans (BONTJE *et al.*, 2018). With this in mind, the following recommendations are intended to address identified deficiencies within the SPTD, as highlighted in this study. These deficiencies could be tackled through forthcoming institutional changes aligning with the state objectives and local tourism plans in Alagoas and other states where tourism plays an important role. Given that the current scope of the SPTD is 2013-2023, we recommend that a new version covering the subsequent decade incorporates climate and weather narratives that reflect context-dependent trade-offs and opportunities, striving for integration with other planning efforts (e.g., socioeconomic and environmental policies). Public policies should be grounded in the socio-ecological characteristics of the local and regional areas, considering socio-ecological systems and resource availability (SANTOS-LACUEVA *et al.*, 2017).

Recommendation nº 1: Acknowledge the rainy season to foster tourism diversification within different seasons and regions

Although current trends emphasize 3S tourism as the primary segment in Alagoas, which justifies typical promotional practices focusing on sunny days—a common strategy in tourism management—the importance of diversifying tourist products and attractions is underscored in the SPTD. To ensure tourism remains a profitable year-round business, it is essential to incorporate the local biogeographic characteristics of Alagoas' coast to the SPTD. This includes rainfall seasonality, particularly in the context of global change (GRIMM *et al.*, 2018). Other tropical countries reliant on tourism, have successfully explored and promoted the rainy season as a period of amenable climate, which combined with other forms of entertainment, such as boat and cruise trips, musical events, and flower exhibitions, lead to an increase in visitors (CHOWDHURY; KASEM, 2014; TRIHN, 2020). For this strategy to succeed, a place-making process is needed to culti-

vate a distinct sense of place capable of embracing the reality of the rainy season and its inherent higher susceptibility to natural disasters. This process leads to a greater awareness of the potential for creating a harmonious relationship between enterprise and the delicate environment, thereby transforming this fragility into a unique tourist experience (TRIHN, 2020). Furthermore, Alagoas offers tourism potential in additional coastal assets beyond 3S tourism, particularly during the rainy season. This includes experience-based tourism opportunities in coastal lagoons like Roteiro and Manguaba Lagoons. Additionally, non-coastal areas with lower rainfall boast rich cultural and historical traits, as seen in destinations such as the São Francisco River Canyons, the town of Piranhas, and the village of Ilha do Ferro. These relatively unexplored tourist elements could significantly boost local economies, recognising the State's unique cultural heritage and popular expressions, while also promoting community-based tourism. In some protected areas, such as *APA Costa dos Corais* and *RESEX Jequiá*, community-based tourism has been encouraged to involve coastal communities in the tourism economy and strengthening the management of natural and cultural resources (LO; JANTA, 2020).

Recommendation nº 2: Increase adaptation capacity in the climate change scenario

Climate change is likely to affect the rainy season patterns in Alagoas. Therefore, it is essential for tourist activities to proactively prepare for its potential effects. One way to achieve this is by incorporating the principles, objectives, guidelines, and tools outlined in the Brazilian National Policy of Climate Change (BRASIL, 2009). For instance, caution and prevention principles should be considered and applied when designing tourism actions. As stated in the SPTD, without specific guidelines addressing issues, it becomes unclear how to proceed in relation to them. Furthermore, assessments of people's abilities, systems, and organisations on how to respond to the consequences of climate change, including analysis of potential impacts, are examples of evaluations that help governments and stakeholders understand the current status of tourism in a given region and how climate change is likely to impact this sector (LAPOINTE *et al.*, 2021). This way, it would be possible to assess the current and future evolution of climate change impacts, designing actions to tackle them, and to increase resilience and adaptive capacity.

Recommendation nº 3: Recognise and diversify economic activities beyond tourism

In this work, we made a deliberate choice to focus on tourism planning rather than other economic activities. However, our analysis underscores that while tourism can serve as an alternative to some socioeconomic challenges in Alagoas, prioritising this economic activity should be taken with caution. While some studies focused on the socioeconomic issues that can arise from tourism (ALVES *et al.*, 2018; MARTINS; MARTINS, 2011), this article emphasises that weather and climate can impose natural constraints to this activity and that climate change represents additional threats to the sector. The narrative "A period of earnings" pointed in the direction of economic activities that coexist and thrive during the rainy season, such as fisheries. Despite changes in the abundance and seasonality of some fishing resources, fisheries continue to play an important role in

coastal communities of Alagoas, constituting a fundamental socioeconomic and cultural activity (SANTOS; SAMPAIO, 2013). However, small-scale fisheries receive little or no social or political attention from those responsible for the socioeconomic planning of the region (TAMANO *et al.*, 2015). Using fisheries as an illustrative example, Alagoas should acknowledge and diversify its economic activities. Considering the narratives of communities could shed light on how to distribute and allocate planning efforts, potentially leading to a proposed integrated economic plan that aligns with the diverse sociocultural, economic, and environmental contexts of the region.

Recommendation nº 4: Integrate other public policies into tourism policy

Considering the identified areas for improvement in the SPTD, we recommend integrating it with other policies, such as those concerning environment, agriculture, energy, and education, to effectively address diverse conditions and initiatives that are important for sustainable tourism (GRIMM *et al.*, 2018). This integration would facilitate a broader consideration of weather and climate challenges, and opportunities, also including climate change. By integrating various policy dimensions, decision-makers and stakeholders can enhance their capacity to holistically reframe existing problems, particularly in response to evolving contexts.

In summary, the identification and analysis of narratives have helped emphasise weather and climate-related issues that are familiar to Alagoas coastal communities. These narratives extend beyond the economic implications in tourism; they encapsulate the psychological and cultural significance of the rainy season, highlighting its multifaceted value to Alagoas, coastal communities, and other life forms. As previously mentioned, the analysis of narratives as a method can provide a way to identify and communicate insights about what people consider significant and important in their context (ALLEN; GIAMPIETRO, 2006). In theory, these narratives enrich planning discussions that increasingly emphasise considering social and cultural aspects alongside technical ones. This is achieved through public participation that incorporates diverse voices and perspectives into plans and programmes. As a result, policy objectives and targets can be tailored to better align with people's needs and expectations, thereby enhancing their management relevance and adaptive capacity (KRAUß; BREMER, 2020). Furthermore, this is particularly important in a context where reinstating connections between human activities and Earth system cycles and processes is pivotal for addressing contemporary issues such as climate change and risk governance (VIEIRA, 2019). This emphasis extends to theoretical fields dedicated to the study of interactions between society and the environment.

Conclusions

In this study, we utilised narratives to investigate the interplay between climate, weather, and tourism planning. Although we recognise that addressing such environmental factors is not the primary focus of this type of planning, our analysis revealed diverse

narratives regarding the rainy season that could provide valuable insights for tourism. Currently, the SPTD primarily aligns with the “Absence of a rainy season” narrative, unfavourable weather can adversely impact 3S tourism for a portion of the year and curb the subsequent generation and distribution of income for the population dependent on it. Albeit taking social and cultural aspects into account, it fails to fully acknowledge the challenges and opportunities related to weather and climate, as emphasised by other narratives. These aspects are critical for 3S tourism and alternative options, including the adverse effects of climate change (e.g., extreme events).

In this context, we posit that narratives hold the potential to bridge human perceptions, values, and meanings to Earth processes and systems, transcending mainstream narratives (or the lack thereof), such as economic justifications. This is especially relevant for addressing planning challenges, such as public participation. Our study reveals that Alagoas should not overly rely on tourism as its primary economic driver, highlighting the significance of embracing alternative narratives and considering our four recommendations for the development of future tourism strategic planning for the State. These recommendations can strengthen government initiatives aimed at developing location-based and actor-centred plans, extending beyond tourism to encompass other economic activities. The narrative research conducted in this study has proven useful in navigating human-biophysical relations. We recommend that it is expanded toward different public policies not only in Alagoas but also in other states.

Acknowledgements

This work is part of the Research-intervention Action Plan (RIAP) “*Será que Chove? - Integrating coastal communities into climate change forecast and nature-based adaptation strategies*”, funded by the British Council (ID reference 715066064-RIAP 4) and coordinated by Instituto Ayni: Conservação Ambiental e Desenvolvimento Sustentável (Brazil). Thanks to Ravena Sthefany Alves Nogueira for helping in map development. Furthermore, the authors acknowledge the centrality and sincerely thank all the participants in this study, as well as the support from the colleagues of the RIAP. In particular, Briana Bombana would like to express thanks to the *Ministerio de Universidades* (Spain) and the European Union for the provision of Margarita Salas funding (*NextGenerationEU*). Juliana Gaeta thanks the Fundação Cearense de Apoio ao Desenvolvimento Científico e Tecnológico for the provision of a technological innovation scholarship, and Ivan Machado Martins thanks FAPESP (São Paulo’s State Research Foundation) for the scholarship #2020/16028-5. Finally, Aline da Silva Cerqueira thanks the Natural Environment Research Council (Grant No. NE/L002485/1) for the support provided as part of the London NERC Doctoral Training Partnership.

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Briana Bombana

✉ briana.bombana@uab.cat

ORCID: <https://orcid.org/0000-0002-6044-3116>

Submitted on: 03/09/2022

Accepted on: 22/12/2023

2024;27:e00108

Ivan Machado Martins

✉ ivanmmartins@gmail.com

ORCID: <https://orcid.org/0000-0003-2241-3386>

Juliana de Carvalho Gaeta

✉ jugaeta@gmail.com

ORCID: <https://orcid.org/0000-0002-4796-5948>

Marcos Paulo Santos Pereira

✉ marcospereira@hotmail.com

ORCID: <https://orcid.org/0000-0003-4694-2370>

Iran Campello Normande

✉ iran.normande@icmbio.gov.br

ORCID: <https://orcid.org/0000-0003-3613-947X>

Aline da Silva Cerqueira

✉ aline.cerqueira@kcl.ac.uk

ORCID: <https://orcid.org/0000-0001-5741-5977>

A política de turismo considera o clima? Explorando as narrativas sobre a estação chuvosa na zona costeira de Alagoas, Brasil

Briana Bombana
Ivan Machado Martins
Juliana de Carvalho Gaeta

Marcos Paulo Santos Pereira
Iran Campello Normande
Aline da Silva Cerqueira

Resumo: Esse estudo busca ampliar a discussão sobre a extensão na qual o turismo pode responder às expectativas socioeconômicas. Como em outras zonas costeiras, o estado de Alagoas tem priorizado a promoção turística, apesar da ocorrência de uma estação chuvosa que freia o desenvolvimento do seu principal tipo de turismo, de sol e praia. Neste contexto, o clima e o tempo são utilizados como pontos de referência para essa análise. Por intermédio de diversas fontes, foram identificadas nove narrativas relacionadas à estação chuvosa. As narrativas foram cruzadas com o Plano Estratégico para o Desenvolvimento Turístico de Alagoas 2013-2023, apontando que a estação chuvosa está mal refletida na política estadual. Para melhor abordar as limitações e demandas locais-regionais atuais, recomendações foram, assim, propostas. Além do escopo desse trabalho, a abordagem das narrativas provou ser útil para ampliar a consideração de valores e significados no desenvolvimento de políticas públicas, potencialmente na relação ambiente-sociedade.

São Paulo. Vol. 27, 2024

Artigo Original

Palavras-chave: Políticas públicas, narrativas, clima e tempo, turismo de sol e praia, Alagoas.

¿La política de turismo considera el clima? Explorando narrativas de la estación lluviosa en la zona costera de Alagoas, Brasil

Briana Bombana
Ivan Machado Martins
Juliana de Carvalho Gaeta

Marcos Paulo Santos Pereira
Iran Campello Normande
Aline da Silva Cerqueira

Resumen: Este estudio buscó expandir la discusión sobre la extensión en que el turismo puede responder a las expectativas socioeconómicas. Como en otras zonas costeras, el estado de Alagoas ha priorizado la promoción turística, pese a la ocurrencia de una estación lluviosa que frena el desarrollo de su principal tipo de turismo, de sol y playa. En este contexto, clima y tiempo son utilizados como puntos de referencia para este análisis. Por intermedio de diversas fuentes, se identificaron nueve narrativas sobre la estación lluviosa. Al cruzarlas con el Plan Estratégico para el Desarrollo Turístico de Alagoas 2013-2023, los resultados destacaron cómo la estación lluviosa está mal reflejada en dicha política pública. Para mejor abordar las limitaciones y demandas locales-regionales actuales, son propuestas recomendaciones. Más allá de esto, el abordaje de las narrativas probó su utilidad para expandir la consideración de valores y significados en políticas públicas, potencialmente en la relación ambiente-sociedad.

São Paulo. Vol. 27, 2024

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