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**The impact of centrality to lifestyle on
surfers'sustainable behavior: a marketing implication on
surf tourism**

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Master in Marketing

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Resumo

Esta tese fornece uma exploração aprofundada da interação entre o turismo de surf, os comportamentos sustentáveis e as estratégias de marketing no contexto da cultura do surf. A investigação centra-se na forma como a centralidade única que o surf tem no estilo de vida influencia o empenho dos surfistas em comportamentos sustentáveis e como estes valores podem ser aproveitados para desenvolver estratégias de marketing eficazes que promovam o turismo sustentável em destinos de surf.

Os dados para o estudo foram recolhidos através de um questionário distribuído globalmente, oferecendo uma visão abrangente dos comportamentos de compra dos surfistas em diversas origens culturais. O inquérito forneceu informações valiosas sobre as motivações, preferências e acções dos surfistas em relação à sustentabilidade. A análise destacou as principais tendências na forma como os surfistas percebem a sustentabilidade, o que motiva as suas decisões e como os seus hábitos de viagem se alinham com os valores ambientais. Os surfistas, que muitas vezes vêem o seu desporto como uma parte essencial da sua identidade, tendem a dar prioridade à sustentabilidade, tanto nas escolhas pessoais como nas relacionadas com as viagens. Esta ligação à sustentabilidade reflecte-se na sua preferência por experiências autênticas, no compromisso com a conservação dos recursos naturais e no respeito pelas culturas locais. Estes valores podem ser eficazmente aproveitados em estratégias de marketing destinadas a promover o turismo sustentável, atraindo turistas ambientalmente conscientes e ansiosos por ter um impacto positivo nos destinos que visitam.

Abstract

This thesis provides an in-depth exploration of the interplay between surf tourism, sustainable behaviors, and marketing strategies within the context of surfing culture. The research focuses on how the unique centrality to lifestyle that surfing holds influences surfers' commitment to sustainable behaviors and how these values can be leveraged to develop effective marketing strategies promoting sustainable tourism at surf destinations.

Data for the study was collected through a globally distributed questionnaire, offering a comprehensive view of surfers' purchasing behaviors across diverse cultural backgrounds. The survey provided valuable insights into the motivations, preferences, and actions of surfers in relation to sustainability. The analysis highlighted key trends in how surfers perceive sustainability, what drives their decisions, and how their travel habits align with environmental values. The findings demonstrate a strong link between the surfing lifestyle and environmentally friendly behaviors. Surfers, who often see their sport as an essential part of their identity, tend to prioritize sustainability in both personal and travel-related choices. This connection to sustainability is reflected in their preference for authentic experiences, commitment to conserving natural resources, and respect for local cultures. These values can be effectively harnessed in marketing strategies aimed at promoting sustainable tourism, attracting environmentally conscious tourists eager to positively impact the destinations they visit.

Keywords

Centrality to lifestyle, Surf tourism, Sustainable tourism, Sustainable behavior, Marketing strategies

CONTENT

Acknowledgment	i
Resumo	iii
Abstract	v
Keywords	v
CHAPTER 1 Introduction.....	1
1.1 Background and context	1
1.2 Problem Statement	3
1.3 Research problem	5
1.4 Research questions and hypotheses	5
CHAPTER 2 Literature review.....	7
2.1 Methodology and theoretical framework.....	7
2.2.1 Measures.....	7
2.1.2 Procedures and sample	8
2.1.3 Introduction to literature review.....	9
2.1.4 Theoretical foundations	9
2.2 Surf culture and its impacts.....	10
2.2.1 Surf tourism	10
2.2.2 Evolution of surf culture and its influence on tourism	12
2.2.3 The relationship between surf and sustainability.....	13
2.2.4 Surfing as a non-ecological sport	16
2.2.5 The surfing boom after COVID-19.....	19
2.2.6 Surf culture and its social and health aspects	20
2.3 Sustainable tourism and destination management.....	23
2.3.1 Definition of sustainable tourism	23
2.3.2 Sustainable tourism development	24
2.3.3 UN agenda 2030 and the Sustainable Development Goals	26
2.4 Theoretical foundations	28
2.4.1 Place attachment.....	28
2.4.2 Place identity	30
2.4.3 Place loyalty.....	32
2.4.4 Destination image	34
2.4.5 Centrality to lifestyle	36
2.5 Hypotheses development.....	39
2.5.1 Community engagement and its impact on word of mouth among surfers	39
2.5.2 Green Attachment and Its Influence on Community Engagement	42

2.5.3 Word of Mouth and Its Impact on Sustainable Purchase Intentions	44
CHAPTER 3 Data analysis	47
3.1 Statistical analysis.....	49
3.2 Quantitative results	52
CHAPTER 4 Discussions	55
4.1 Community Engagement, Centrality to Lifestyle, and WOM	55
4.2 Green Attachment, Centrality to Lifestyle, and Community Engagement.....	56
4.3 WOM, Centrality to Lifestyle, and Sustainable Purchase Intentions	57
4.4 Practical Implications of Centrality to Lifestyle.....	57
4.5 Limitations and Future Research	58
Conclusion	59
Sources	60
Annex	70

CHAPTER 1

Introduction

1.1 Background and context

Surfing may be seen as a pastime, to some people; however it has gone through significant changes over time and become more than just a hobby it's a way of life that's closely connected to cultural norms and societal beliefs, about the environment and social responsibility too. Surfing is more, than catching waves it's a lifestyle that nurtures a bond with the sea and encourages surfers to appreciate the beauty of nature while taking on a responsibility to protect it.

The deep bond, with nature plays a role in the surfing culture's identity. Surfers form a sense of admiration for the ocean and its ecosystems through their visits to coastal areas (as mentioned by Borne in 2017). This admiration leads them to get involved in environmental protection initiatives and incorporate eco habits into their daily routines. However surfers encounter obstacles when trying to practice sustainability despite their inclination, toward environmental stewardship. The difficulties frequently arise from the clash, between the values upheld by the surfing community such as freedom and self expression . The need, for sustainability measures that call for unity and compliance with set guidelines (Ruttenberg & Brosius ; 2017).

The world of surfing. Which includes brands, surfboard makers and sellers media companies and event planners. Has an impact, on how surfers act and think. This industry doesn't just offer the gear and venues for surfing. Shapes the stories that portray the essence of being a surfer. Hence the surfing industry wields an influence, in encouraging surfers to adopt eco friendly practices (Pontin Jess & O'Brien Danny 2013). By endorsing products and supporting green initiatives while emphasizing the crucial role of sustainability, in their promotional efforts; businesses can greatly influence the choices individuals make. Shaping not only their personal lifestyles but also their interactions within the community, at large.

Surfing's impact goes beyond those who surf regularly. Its culture of freedom and connection, with nature appeals to a broad range of people who may never have even tried surfing themselves. Its influence is evident, in the popularity of surf themed media and products that embody the spirit of the surfing lifestyle.

In publications, like surf magazines and social media posts. Even in movies and books about surfing culture influence peoples beliefs about the sport as a way to connect deeply with nature. Surfers are often portrayed as guardians of the environment due to their perceived awareness and their lifestyle that aligns with the world. (Kampion, 2003; Ford and Brown, 2005; Laderman, 2014)The surfing scene is commonly viewed as an escape from norms and a retreat, into the arms of nature. (Kampion, 2003)

Surfing and the surf industry could potentially have an impact, on changes by promoting living practices that encourage public awareness of environmental issues and influence the development of policies supporting sustainability initiatives.

This research focuses on delving into the link, between the surfing culture and friendly actions. It delves into how surfers strong bond with nature and their active participation in the community affect their buying patterns and their position as champions for sustainability. By investigating this interaction the study aims to provide understanding on how the principles and behaviors of the surfing lifestyle can be used to advance eco tourism and encourage responsibility, on a larger scale.

1.2 Problem Statement

The transformation in public perception and participation in surfing has been remarkable over time. Buckley (2002) estimated that there were over 10 million active surfers worldwide, with projected annual participation growth rates ranging between 12% and 16%. This growth has continued, with Ponting and O'Brien (2014) and the International Surfing Association (ISA, 2023) reporting that the global number of surfers has now surged to approximately 35 million, with enthusiasts spread across at least 162 countries. Martin & Assenov (2012) emphasize that the growing global popularity of surfing has not only expanded the reach of surf culture but also had profound implications for tourism in coastal regions worldwide.

Over the past five decades, surfing has evolved from a niche coastal activity into a global phenomenon with significant economic and cultural impact. Surfing now contributes over \$13 billion to the global economy, demonstrating its role as both a cultural force and an economic driver. This transformation is particularly evident in European surfing hotspots like Ericeira (Portugal), Hossegor (France), and Mundaka (Spain), which have transitioned from simple vacation destinations into vibrant centers of surf culture and tourism.

To better understand the demographics of surfers, the Surfrider Foundation conducted a socioeconomic and recreational profile of surfers in the United States. Despite the surf industry's multi-billion-dollar valuation, there is limited knowledge about the backgrounds of its participants. The study found that the average surfer is a 34-year-old male with an annual income of \$75,000, spending approximately \$40 per visit to a surf location, thus significantly contributing to local economies. This purchasing power presents a valuable opportunity to influence sustainability through consumer behavior.

This research delves into the evolution of surfing from a mere sport to a significant cultural phenomenon that shapes the lifestyle and identity of its participants. It examines how surfing serves as an expressive outlet for self-identity, deeply rooted in cultural heritage (Dolnicar & Fluker, 2003). Additionally, the study explores how the cultural dimensions of surfing influence marketing strategies within the industry. Companies are increasingly leveraging the rich tapestry of surf culture to connect with this demographic through targeted campaigns that promote sustainable practices among both surfers and visitors.

The surge in surfing's popularity has not only led to the discovery of new surf spots but has also had a considerable economic impact, fueling the growth of surf tourism a rapidly expanding niche sector worldwide (Barbieri & Sotomayor, 2013; Mach & Ponting, 2021). Additionally, the market size of the industry surf equipment was estimated at 4 billion USD in 2022 (Statista) with a projected increase to 4.8 billion USD by 2027 (see figure 1). Given this significant growth, it becomes crucial to analyze the sustainable behaviors of surfers in order to reduce their carbon emissions and promote the development of truly sustainable surf gear.

This study aims to investigate how the surfing lifestyle influences surfers' purchasing decisions, particularly in their preference for sustainable choices. By exploring whether surfing culture translates into consumer behavior, this research enhances our understanding of consumer trends within this unique community. Through the analysis of marketing campaigns and consumer behavior models, this thesis seeks to demonstrate how marketing strategies can effectively promote sustainability practices among surfers.

Ultimately, this thesis provides a comprehensive exploration of the connections between the surfing lifestyle, sustainable behaviors, and marketing strategies. It offers practical recommendations for policymakers and tourism operators on leveraging the inherent values of the surfing community to foster sustainable development in surf tourism. By emphasizing the importance of sustainable practices and proactive resource management, surf destinations have the potential to become models of sustainable and competitive tourism, benefiting both the environment and local communities.

1.3 Research problem

Despite the popularity of surfing and its lifestyle, among people in regions the incorporation of sustainability practices into surf tourism and culture varies and has not been thoroughly examined. There is a lack of knowledge about the impact of community involvement in the surfing community on sharing information through channels the connection between surfers' love for the environment and their active participation, in communities and how these factors combined influence responsible consumer choices. This thesis seeks to address these gaps by examining the following key research questions:

H1: How does community engagement influence word of mouth among surfers?

H2: Does green attachment positively affect community engagement?

H3: Does word of mouth have a positive effect on sustainable purchase intentions?

1.4 Research questions and hypotheses

The primary objectives of this research are to:

- Explore the relationship between community engagement and word of mouth within the surfing community.
- Investigate the influence of surfers' green attachment on their level of community engagement.
- Examine the impact of word of mouth on sustainable purchase intentions among surfers.

These objectives are designed to provide a comprehensive understanding of how the surfing lifestyle influences behaviors related to sustainability and how these behaviors can be leveraged to promote more sustainable practices within the surf industry. Based on the research problem and objectives, the following hypotheses have been formulated:

H1: Community engagement has a positive effect on word of mouth among surfers.

H2: Green attachment has a positive effect on community engagement

H3: Word of mouth has a positive effect on sustainable purchase intentions.

CHAPTER 2

Literature review

2.1 Methodology and theoretical framework

2.2.1 Measures

-A study was conducted to analyze surfers' environmental perceptions (cf figure 11), structured in several key steps. The initial phase involved gathering basic demographic information, including age, gender, educational background, income levels, and country of origin. This provided a comprehensive understanding of surfers' behaviors and perspectives, with an emphasis on the role sustainability plays in their lifestyle.

Next, participants were asked a series of multiple-choice questions to explore their engagement in surfing activities, including how often they surf and the typical distances they travel to reach their surf spots (from 50km to 200km). Surfing habits were further assessed by asking respondents how frequently they surf, with options ranging from "once a year" to "daily (when there are waves)." Additionally, they were asked where they typically surf. Whether it's mostly, at their spot or if they travel distances based on the surf conditions.

When assessing sustainability purchasing intentions (SPI) of individuals, in the study group were inquired about their inclination to buy goods like "My plan is to buy eco conscious products due to their environmental impact" and "I am prepared to spend extra on products that are sustainable." This part focused on understanding participants' views, on shopping using a rating scale that goes from agree (1) to strongly disagree (7). These items were borrowed from previous studies from Chang and Chen (2008)

Participants were asked to express their views, on practices by rating statements such as "Green practices are beneficial" and "Green practices demonstrate responsibility." These responses were used to assess their attitudes, toward initiatives and sustainability efforts. These items were borrowed from previous studies from Ajzen (2001)

When it came to evaluating Word of Mouth (WOM) regarding surf products participants were asked about their likelihood of recommending products to their friends and family members by using statements, like "Would you suggest sustainable surf products to your friends and family?" Participants rated these statements on a Likert scale to understand how willing

surfers were to support products. These items were borrowed from previous studies from Nusair et al (2010).

When gauging Community Engagement (CE) levels, among participants in the surfing community surveyors inquired about their involvement levels by presenting statements such as "Being part of the surf communities' guidelines is advantageous, to me". Encouraging and aiding community members motivates me." These questions aimed to capture how connected and active respondents felt within the surfing scene. These items were borrowed from previous studies from Azapagic et al (2005).

Feeling emotionally connected to surfing spots (place attachment or PA) was gauged using statements such, as "When I'm not there I miss the surf spot" and "The surf spot feels like a part of me." The survey aimed to understand how deeply individuals feel connected to the locations they surf at. These items were borrowed from previous studies from Lewicka, (2008).

Surfing plays a role in the lives of respondents according to the concept of Centrality, to Lifestyle (CL). Statements, like "If I give up surfing, I might lose touch with friends" and "Surfing shapes aspects of my daily life" were used to gauge the importance of surfing in their social connections and everyday activities. These items were borrowed from previous studies from Van den Heuvel, L., Blicharska, M., Stensland, S., & Rönnbäck, P. (2022)

Surfers were asked to share their thoughts on the destination image (DI) evaluating factors, like the cleanliness of the beaches and the friendliness of the locals, at the surf spot to understand how environmental and cultural features influence their perception of a destination. These items were borrowed from previous studies from Beerli & Martin (2004)

2.1.2 Procedures and sample

This study employed a structured quantitative approach, using an online survey to reach the global surfing community efficiently. The survey captured key variables such as demographics, environmental attitudes, and surfing behaviors, making it a suitable method for gathering diverse data from different geographical areas.

The questionnaire included sections on age, gender, education level, incomes, and country of origin, allowing for an analysis of sustainability behaviors across population segments. It also measured surfing habits, including frequency and travel distances, providing insight into the centrality of surfing in participants' lifestyles and its environmental impact.

To encourage participation, the survey was distributed through social media, surf forums, display in 3 surf shops in Costa da Caparica (Portugal) with QR code link and email invitations. It combined closed-ended questions (Likert scales, multiple-choice)

This structured methodology, collected from February 2024 to June 2024, provided a comprehensive analysis of surfers' behaviors and sustainability attitudes. A total of 135 answers were collected. The data collected helps address the research questions on environmental awareness and purchasing behavior within the surfing community.

2.1.3 Introduction to literature review

The literature review is a critical component of academic research, providing the foundation upon which new research builds. It synthesizes existing knowledge, identifies gaps in the current understanding, and sets the stage for the research questions and hypotheses that guide the study. This chapter will examine key concepts and theories that are integral to understanding the impact of centrality to lifestyle on surfers' sustainable behavior, particularly within the context of surf tourism. The discussion will begin by outlining the theoretical foundations that inform the research, followed by an exploration of specific concepts such as place attachment, place identity, place loyalty, destination image and their evolution into the concept of centrality to lifestyle.

2.1.4 Theoretical foundations

The theoretical foundation of this research is based on the convergence of environmental psychology and marketing theory within the field of tourism studies with a key emphasis on the idea of place attachment. Place attachment denotes the mental connections that individuals form with particular locations that impact their actions and feeling of connection to a place. A linked notion is that of place identity which underscores how these places become essential, to an individuals self perception. Exploring Place loyalty delves into these concepts by looking at how emotional ties lead to return visits and recommendations to others regarding these locations. Moreover has an impact, on tourists perceptions and choices when selecting their travel destinations.

The core concepts merge in the notion of centrality to one's lifestyle which implies that specific activities and locations form the essence of an individual's identity and daily habits; hence influencing behaviors linked to sustainability well. However the connection, between surfing and friendly actions highlights a contradiction which Laviolette (2019) characterizes as potentially "hypocritical." Lazarow and Olive (2017) in their work on this topic point out the conflicting aspects of this connection surfers have with the environment. Even though surfers see themselves as closely linked to nature and forming a relationship with it; their behavior often shows discrepancies, in their dedication to sustainability efforts.

2.2 Surf culture and its impacts

2.2.1 Surf tourism

Surf tourism is defined as a type of travel where individuals are motivated primarily or secondarily by surfing, whether to actively participate or simply enjoy and observe the sport and its associated events (IGI Global, 2019). Surfing, a sport requiring specific coastal conditions for wave formation, ties its practice uniquely to certain geographic locations. This territorial specificity offers unique opportunities for regions to attract travelers seeking both the thrill of surfing and the beauty of coastal settings. As surfing grows in prominence through international competitions, media coverage and professional endorsements, iconic surf spots around the globe are showcased, drawing surfers to experience once-in-a-lifetime waves in diverse international waters.

Vanessa Ratten, in her review "Entrepreneurial Intentions of Surfers," (2018) highlights a case study at a major international competition in Bells Beach, Australia. She discovered that surfers recognize significant entrepreneurial opportunities deriving from such events, which often inspire more entrepreneurial intentions and openness to new ideas due to their close ties with surf tourism. This suggests that governments and industry stakeholders could benefit from nurturing this entrepreneurial spirit, potentially forging new connections between local industries and surf-related startups

Ludovic Falaix, in an article from the *Juristourisme* journal, discusses the economic impact of surfing on the Aquitaine region of France. A 2013 study by TNS Sofres showed that 55% of surfers visiting Aquitaine's beaches are tourists, with nearly a quarter being international visitors. These surf tourists contribute significantly to the local economy, with their spending accounting for 1.5% of the region's total tourist expenditures, or nearly 46 million euros annually. In response, the Public Interest Grouping of the Aquitaine Coast included surfing in its sustainable development strategy for 2007-2020, recognizing its potential to boost regional tourism (*Juristourisme*, No. 154).

The legal framework within the European Union also supports the mobility of surf instructors. According to the European Directive 2005/36/EC, individuals qualified in one member state are entitled to teach surfing in any other EU country, ensuring a consistent standard of coaching across borders and enhancing the professional development of the sport.

Brazil, the second-largest surfing nation after the United States, benefits significantly from surf tourism thanks to its extensive coastlines that offer excellent conditions and host numerous international competitions. A study published in the *International Journal of Tourism Cities* by Sabrina da Rosa and colleagues (da Rosa & al. 2019) analyzed the factors that influence surfers' perceptions of Brazilian surf destinations. They identified key cognitive factors—like hospitality, surf conditions, local atmosphere and entertainment—that, along with affective and conative elements, shape the overall appeal of surf tourism destinations.

Surf tourism not only encapsulates the adventurous spirit of its participants but also plays a significant role in the socioeconomic dynamics of coastal communities worldwide. As this niche market continues to expand, its impact on local economies, cultural exchange and international cooperation offers a promising wave of opportunities for regions ready to capitalize on the global appeal of surfing.

2.2.2 Evolution of surf culture and its influence on tourism

The evolution of surf culture from a niche, coastal pastime to a global phenomenon has significantly shaped the tourism industry over the past few decades. In the 1970s, towards the end of the 20th century, the increasing popularity of board sports marked the beginning of the commercialization of the surf industry. Guibert (2006) notes that this period represented a pivotal shift as surfing transitioned from being a primarily beach-based activity to a trendy urban phenomenon, captivating audiences far beyond traditional coastal areas. The rapid expansion of the surf industry during these decades created numerous job opportunities and contributed billions of dollars in annual revenue, transforming surfing from an elite pursuit into a mainstream recreational activity and a major draw for tourists in various global destinations (Callède, Sabatier, & Bouneau, 2014).

However, the increasing popularity of surfing has also led to challenges similar to those seen in other forms of niche tourism. Davis and Tisdell (1995) discuss issues of overcrowding in scuba diving tourism, which parallel those in surf tourism. The quest for uncrowded, high-quality waves drives surfers to remote areas, mirroring the preferences of scuba divers who seek pristine and less congested sites. Ponting (2015) argues that this pursuit of unspoiled surfing spots impacts not only the sustainability of natural resources but also significantly influences the socio-economic dynamics of host communities. When tourists, particularly surfers, visit these distant places, they introduce various economic and environmental pressures, which can lead to both positive and negative outcomes for the local population.

The demographic makeup of surfers as a highly mobile and international group further underscores their influence on tourism. Their travel patterns, often involving frequent trips to remote surfing destinations, highlight a strong interest in travel and tourism that exceeds the average rate among other tourists (Barbieri & Sotomayor, 2013). Unlike the broader tourist population, surfers frequently choose to visit developed but less typical tourist destinations, driven by the allure of uncrowded waves and unique surfing experiences. Teixeira (2017) suggests that these unique travel preferences and the high mobility of surfers result in substantial economic, cultural and environmental impacts on the areas they frequent. The presence of surfers in these regions can drive local economic development, but it also presents challenges related to cultural integration, environmental degradation, and the management of natural resources.

Lazarow, Miller & Blackwell (2009) argued that the deep engagement of surfers in surf-related travel reflects broader trends seen in lifestyle sports, where participants not only engage in physical activities but also actively shaped by the cultures and economies of their chosen destinations. This interaction between lifestyle choices, travel experiences and economic effects demonstrates how a niche activity like surfing can significantly influence tourism trends. The impact of surf culture on tourism provides a unique perspective for exploring contemporary issues related to tourism practices, sustainability efforts and the balance between cultural preservation and economic development.

The evolution of surf culture from a localized, elite activity to a global phenomenon has had profound implications for tourism. While the growth of surf tourism has brought economic benefits and increased global awareness of surfing, it has also introduced challenges related to sustainability and cultural integration. Fox, N., Marshall, J., & Dankel, D. J. (2021). The ongoing influence of surf culture on tourism highlights the need for a balanced approach that maximizes the positive impacts of surf tourism while mitigating its potential downsides. This dynamic interplay between surf culture and tourism underscores the broader trend of lifestyle sports shaping modern tourism practices and contributing to the discourse on sustainable tourism development. Langseth, T., & Vyff, A. (2021),

2.2.3 The relationship between surf and sustainability

The link, between surfing and the ocean setting underlines the pressing need for sustainability in this sport according to Ponting et al (2005) and Larson et al (2018). Surf tourism (SST) as they posit must find a mix between preserving nature and fostering development. This equilibrium is especially vital in safeguarding the charm of surf spots that often comprise habitats prone to damage, from excessive human activity and environmental harm. The study highlights the importance of maintaining a balance to preserve the charm that draws both surfers and tourists to these areas intact.

Promoting this perspective are academics such as Borne & Ponting (2015) along with Towner (2015) who support a surf tourism model aimed at enhancing the benefits for communities while reducing its impact to a minimum extent possible. They suggest that finding this equilibrium necessitates the implementation of thoughtful strategies and management techniques that take into account the sustainability limits of specific regions. This involves giving precedence to the lasting welfare of local residents, over immediate profits derived from higher visitor counts. Of trying to increase the number of visitors, in surf tourism development efforts should concentrate on improving the overall tourist experience by highlighting environmentally friendly practices like using sustainable surfing equipment supporting local businesses and incorporating educational programs that promote awareness, about local conservation projects.

Surfers are often seen not as sports enthusiasts but, as caretakers of the environment in various writings and studies like the one by Callède et al (2014) and Laviolette (2019). It is highlighted that surfers' strong bond with the sea and nature makes them more aware of concerns and actively involved in conservation efforts. The dedication to causes is now evident, in the way surf spots are supervised and advertised. Numerous surf camps and schools have begun integrating eco methods into their activities by using energy sources and adopting recycling and composting practices while also providing educational initiatives to inform surfers about regional environmental issues and ways to tackle them. French surfing federation (2023)

The connection, between surfing and sustainability is not straightforward. The surf community is increasingly embracing measures; however the effects of surf tourism on ecosystems and communities are still a topic of discussion. On the one hand according to Borne and Ponting (2015) surf tourism has the potential to trigger improvements by raising awareness about conservation issues and offering financial motivations, for local communities to safeguard their environment. Without handling and supervision the arrival of visitors can result in harm to nature, cultural upheaval and a loss of the charm that defines these locations.

Studying how surfing and sustainability are connected shows how surfers and the surf industry can raise awareness and embrace practices simultaneously. Research, by Ponting et al (2005) and Larson et al (2018) underscores the impact that regulated surf tourism can have on conservation initiatives and local societies. This strategy aligns with the aims of tourism development to harmonize environmental preservation with social and economic prosperity.

Exploring the connection, between surf culture and sustainability offers insights into how surfing can impact and be impacted by sustainability initiatives. The dedication of surfers, to protecting the environment as outlined by Callède et al. (2014) Highlights the opportunity for the surfing community to set an example in encouraging eco behaviors. The bond, between sustainability and surf culture not demonstrates the value of consciousness but also sets surfing as a role model for industries aiming to embrace sustainable practices, in their operations.

2.2.4 Surfing as a non-ecological sport

- A Highly Polluting Sport

Surfing, often romanticized as a harmonious interaction with nature, paradoxically contributes significantly to environmental degradation. Guibert and Pickel-Chevalier (2017) highlight that surfer, traditionally seen as protectors of the ocean, face a difficult reality when it comes to the sport's ecological footprint. As winter approaches in regions like France, many surfers either invest in extensive gear to withstand cold temperatures or travel to warmer destinations globally. Both choices, intended to keep surfing year-round, come with considerable environmental costs—either through the carbon emissions associated with travel or the environmental impact of manufacturing and disposing of surf gear.

Wheaton (2020) further explores this contradiction, pointing out the inconsistency between the surfer's self-image as an environmental steward and the actual practices within the sport. While surfers often claim to support sustainability, the industry that sustains their passion including surf tourism, equipment production and international competitions—contributes significantly to environmental harm. Wheaton argues that the surf culture, which prides itself on a deep connection to nature, must grapple with the reality that it is part of a highly polluting industry. Although technological advancements and innovations in sustainable development are emerging, Wheaton notes that they are not progressing quickly enough to fully mitigate the sport's-environmental-impact.

As Tony Butt (2015) highlights in *Surf Travel: The Elephant in the Room*, the use of air travel a « carbon-intensive mode of transportation” by surfers has increased significantly over the past few decades and continues to rise. Millions of surfers frequently travel on long-distance flights to reach surfing destinations across countries all over the world, contributing substantially to environmental degradation (Butt, 2015). Moreover, surfers often drive long distances in search of uncrowded surf spots. Based on a survey of surfers' carbon footprints, Butt argues that, despite their efforts to live environmentally conscious lives, the extensive travel they undertake mainly by plane results in a higher ecological footprint compared to the average citizen (Butt, 2015)

- Equipment

The evolution of surfboards reflects a quest for innovation while raising significant environmental challenges. Historically, the heavy wooden boards used by the Polynesians held strong cultural and symbolic value. However, with the introduction of modern materials such as balsa wood, polyurethane foam, and advanced composites, surfing has been transformed, particularly with the emergence of the shortboard in the 1960s, which brought greater agility and performance.

Guibert and Pickel-Chevalier (2017) point out that today's surfboard manufacturing, often centered in Asia, depends on materials like polyurethane or polystyrene for the foam core, combined with fiberglass. Laviolette (2019) describes modern surfboards as “a toxic cocktail of plastics, resins, glues and fiberglass”

This process is highly damaging to the environment, generating large amounts of waste and using non-biodegradable and sometimes carcinogenic substances. The contrast between surfing's "natural" image and its environmental impact has pushed the industry to focus more on sustainability, integrating modern technology with craftsmanship and environmental consciousness. Furthermore, as Laderman (2014) notes, the surf industry offers a wide range of products, from surfing "hardware" such as boards, fins, and wetsuits to the more profitable clothing and accessories sector. This latter segment includes major global sports brands like Nike, indicating that the market for surfing gear reaches beyond the surfer community.

Wilson, B., & Millington, B. (2013) following by Wheaton (2020) also address the environmental cost of essential gear such as neoprene wetsuits. Neoprene, a synthetic rubber derived from petroleum and limestone, is not only energy-intensive to produce but also contributes to the growing problem of microplastic pollution. Over time, as wetsuits degrade, they release microplastics into the ocean, exacerbating environmental damage. This issue directly contradicts the surfers' image as protectors of the seas, highlighting a significant disconnect between the sport's cultural narrative and its environmental impact.

Patagonia is one of the few brands actively working to create sustainable wetsuits using ecological materials that are safe for the environment, particularly with their Yulex wetsuits. Patagonia has garnered academic attention for its pro-environmental practices and commitment to "green consumerism" (Erickson, 2011). Founded by climber Yvon Chouinard in 1972, the company has consistently aimed to develop products aligned with Chouinard's own environmental-ethics-(Erickson, 2011).

Similarly, Soörüz has made significant advancements in producing eco-friendly wetsuits by incorporating materials such as Bamboo, recycled polyester (2013), Yulex (2015), and Naturalprene (2016). Although Limestone, a fossilized limestone material, reduces the use of petrochemical products, its extraction remains energy-intensive and non-renewable. In 2018, Soörüz tested the process of grinding oyster shells in La Rochelle, France. This research led to the creation of two new materials: BIÖPRENE, which is mostly bio-sourced and made from a blend of oyster powder, natural rubber, sugarcane, and non-food vegetable oil, and OYSTERPRENE. (Sooruz, 2020) ; (Erickson, 2024)

Both Guibert and Pickel-Chevalier (2017) and Wheaton (2020) emphasize that the surf industry's reliance on these polluting materials, alongside the slow pace of adopting sustainable alternatives, underscores a broader issue: the need for a cultural shift within the surfing community. While the community prides itself on its connection to the ocean, the environmental reality of surfing reveals a gap between this ideal and the actual practices. Addressing this contradiction, as both sets of authors suggest, will require not only technological innovations but also a more profound commitment from the surfing culture to align-their-lifestyle-with-sustainable-practices.

2.2.5 The surfing boom after COVID-19

The COVID-19 pandemic, with its unprecedented global impact, has led to a profound reevaluation of personal values and priorities. As lockdowns confined individuals to their homes and isolated them from their usual routines, many found themselves engaging in deep introspection regarding their careers, happiness, and overall life satisfaction. Mach (2021) discusses how this period of enforced isolation shifted the focus from traditional markers of success, such as financial stability and professional advancement, to more intrinsic values like personal fulfillment and freedom. This shift in perspective set the stage for a broader societal recalibration, where the pursuit of happiness and meaningful life experiences became paramount.

In this context, the allure of freedom and the pursuit of genuine fulfillment gained prominence, fueling a resurgence in activities that offered both physical engagement and a sense of liberation. Surfing saw a remarkable increase in popularity during this time. Aguiar-Quintana et al. (2022) note that surfing evolved from being a seasonal hobby to a year-round pursuit for many individuals who found in the sport not only a challenge but also a pathway to personal growth and happiness. For these individuals, surfing went beyond a simple pastime, evolving into a vital aspect of their lifestyle and a way to find balance in a world that had been plunged into chaos.

In France, this post-pandemic boom in surfing is particularly evident. The French Surfing Federation (2021) reported a 50% increase in registered surfers since the start of the year, a growth trend that was already robust before the peak summer season. This surge in participation reflects a broader shift within French society, where nearly one million people are now engaged in surfing, up from 680,000 in the previous years (FSF, 2016-2022). This growth suggests that surfing has become more than just a leisure activity; it has emerged as a central lifestyle choice for a significant portion of the population.

Ponting (2021) highlights how surfing has been increasingly adopted as a lifestyle, particularly in the wake of the pandemic. Individuals drawn to the sport's values—freedom, balance, and personal fulfillment—are incorporating surfing into their daily routines, viewing it as a vital component of their identity. This perspective positions surfing not just as a physical activity but as a holistic approach to life that aligns with the broader cultural shift towards valuing health, well-being and a sustainable connection with the environment.

The pandemic's impact on surf tourism also underscores the resilience and adaptability of the surfing community. Mach (2022) points out that as global travel nearly halted, surfers displayed a unique crisis-resistant behavior by quickly adapting to travel restrictions and finding ways to access surf destinations. This behavior exemplifies the crisis-resistant nature of surf tourism, where surfers often view crises as opportunities to enjoy less crowded waves, thereby enhancing their surfing experiences.

The overall effect of the COVID-19 pandemic on surfing has been to reinforce and even amplify its appeal. As Mach (2021) and Aguiar-Quintana et al. (2022) suggest, the pandemic has brought people closer to nature and encouraged a lifestyle that prioritizes personal freedom, health, and well-being. The sustained popularity of surfing in the post-COVID era reflects a wider cultural shift towards activities that promote not only physical health but also mental well-being and a deeper, more sustainable connection with the environment.

This shift towards integrating surfing into daily life and viewing it as a core component of personal identity and well-being presents new opportunities for the sustainable development of coastal communities. As Ponting (2021) argues, the centrality of surfing in this new lifestyle model could serve as a blueprint for other sectors aiming to realign their strategies around sustainability and well-being in a post-pandemic world. The lessons learned from the surfing community's response to COVID-19 could inform broader efforts to promote environmentally conscious and health-oriented leisure practices, offering a model for how to balance personal fulfillment with sustainable development in a rapidly changing global landscape.

2.2.6 Surf culture and its social and health aspects

Surf culture, often perceived through various lenses, has undergone significant transformations since its early days. In his book, "The First Era of Surfing in France: A Socially Exclusive Sport," Christophe Guibert (2005) explores the challenges faced by surfers in France during the 1960s. According to Guibert, surfers at that time were frequently depicted by the media as outcasts or rebels, associated with nonconformity and, at times, substance abuse. This portrayal painted a negative image of the sport and its participants, contributing to the marginalization of surfing within mainstream society.

Contrasting with this early perception, surfing gradually gained acceptance in Europe, largely due to efforts by individuals from the social elite who sought to redefine the sport's image. Joel de Rosnay, a French scientist and author, was a key figure in this transformation. As Guibert (2005) notes, de Rosnay's advocacy, particularly through media channels, was instrumental in promoting surfing as a legitimate and respected activity. His efforts led to the establishment of surf schools and clubs, fostering a sense of community, and embedding values such as respect and camaraderie within the sport. This shift in perception is evident today, where surfing enjoys widespread popularity, especially in regions like Aquitaine and the Basque Country, supported by over 180 clubs (Giplittoral, 2018).

While Guibert (2005) focuses on the social evolution of surfing, others emphasize the sport's broader social and health benefits. For instance, Joe Taylor's (2010) study, which involved offering surfing lessons to a group of 20 individuals under the guidance of a clinical psychologist, demonstrated significant improvements in participants' self-confidence, self-esteem and overall psychological health within six weeks. This research attracted attention from healthcare professionals and media outlets like the Daily Mail, The Telegraph, and the BBC, highlighting the therapeutic potential of surfing.

The concept of "Surf Therapy" has since gained traction, expanding the understanding of surfing beyond a recreational activity. The Surfrider Association describes surf therapy as more than just riding waves; it involves a range of seaside activities that cater to people of all ages and skill levels, emphasizing the sport's mental health benefits. This perspective is supported by Orams and Towner (2013), who argue that surfing, as a human activity dependent on natural capital like wave breaks and environmental features such as water quality, can be studied as a cultural ecosystem service (CES) that contributes to human mental and physical health.

Further underscoring the therapeutic value of surfing, the formation of the International Surf Therapy Organization (ISTO) in 2017 has played a crucial role in coordinating research and initiatives aimed at helping various communities, including survivors of domestic violence, marginalized youth, veterans and individuals with disabilities. Barucq and Guillaume (2014) highlight how surf therapy is not only an emerging field of research but also a practical tool for social inclusion and healing, as seen in community projects like the Clinique d'Amade in Bayonne, where surfing is used as a therapeutic intervention for those facing significant challenges.

These developments illustrate the evolution of surfing from a sport once very niche to a powerful instrument for social and therapeutic engagement. While Guibert (2005) portrays the early struggles of surf culture in gaining social acceptance, the work of Taylor (2010) and organizations like ISTO showcase how the sport has transcended its original image, becoming a vehicle for promoting mental health, social cohesion, and community healing. The narrative of surfing today is one of inclusivity, recovery and empowerment, extending far beyond the confines of the surf community itself.

2.3 Sustainable tourism and destination management

2.3.1 Definition of sustainable tourism

Sustainable tourism, as defined by the World Tourism Organization, is a form of tourism that carefully considers its future economic, social and environmental impacts while addressing the needs of visitors, industry professionals, the environment and host communities. This definition highlights the necessity of fostering tourism practices that are environmentally friendly, maintain cultural authenticity and deliver economic benefits that are equitably shared among community members (UNESCO, 2012). The concept of sustainable tourism has broadened over time, now encompassing various approaches such as responsible travel, ethical tourism and solidarity-based tourism. Each of these approaches emphasizes travel that respects both the local residents and the travelers, preserves cultural heritage, and safeguards the environment.

The importance of sustainable tourism is not merely theoretical but crucial in the context of the growing global tourism industry and its potential environmental repercussions. The French NGO "ATD" reinforces the idea that sustainable tourism seeks to balance three core principles: optimizing the use of environmental resources, preserving the socio-cultural authenticity of host communities, and ensuring the long-term economic viability of tourism operations. These objectives are designed to uphold essential ecological processes, protect natural resources and biodiversity, and promote intercultural understanding and tolerance.

This discourse around sustainable tourism becomes particularly significant when applied to surf tourism, where tourists are in direct and frequent contact with natural environments. The interaction between surfers and the natural settings they visit places a unique responsibility on the surf tourism industry to manage these interactions sustainably. Unlike more passive forms of tourism, surfing demands active engagement with the environment, making the need for sustainable practices even more critical.

As the literature suggests, (Ponting; 2015, Carvalho; 2018, Assenov; 2012) the challenge for surf tourism is to develop strategies that ensure the activities of visiting surfers contribute positively to environmental conservation rather than causing harm to the ecosystems they enjoy. The principles of sustainable tourism must be integrated into the development and management of surf destinations to preserve these natural environments for future generations.

This strong emphasis on sustainable tourism principles provides a foundation for further examining how surf tourism aligns with broader sustainability goals. It sets the stage for a deeper exploration of the interplay between surfing, sustainable practices, and community impacts, which will be discussed in subsequent sections. By understanding surfing as not just a sport but a form of expression that is intimately tied to nature, the importance of sustainable tourism in this context becomes even more apparent.

Although many outdoor sports take place in natural environments, the relationship between surfing and the ocean remains singularly unique. This study focuses specifically on surfing's profound connection to nature, omitting comparisons with other nature or water sports to highlight the distinct environmental and cultural dimensions inherent to the surfing experience.

2.3.2 Sustainable tourism development

The growth trajectory of global tourism has proven to be remarkably resilient, even in the face of the global COVID-19 pandemic that disrupted economies and societies worldwide from 2020 to 2022. Initial predictions suggested that the pandemic might permanently alter travel behavior, leading to a decline in international tourism and offering a much-needed respite for overcrowded destinations. Contrary to these expectations, recent data from 2023 indicates a rapid rebound in international tourism, with numbers quickly approaching pre-pandemic levels. (UNWTO; 2023) This resurgence underscores a critical shift in focus from merely limiting tourism expansion to managing it wisely, a principle that lies at the heart of sustainable tourism development.

Sustainable tourism development is simply a reactionary approach but a comprehensive strategy aimed at balancing the multifaceted impacts of tourism on the economy, society and the environment. It advocates for the sustainability of all forms of tourism and across all destinations, ensuring that growth is managed in a way that benefits both present and future generations. This concept transcends simple categorization and requires a nuanced understanding of the complex dynamics at play. UNWTO defined sustainable tourism development as: "Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities"

Ritchie and Crouch (2011) provide a foundational framework for understanding sustainable tourism development, identifying four key pillars: ecological preservation, economic vitality, socio-cultural preservation and governance effectiveness. Each of these pillars necessitates specific policy interventions to achieve true sustainability. For example, ecological preservation might involve policies aimed at protecting natural habitats and biodiversity, while economic vitality could focus on ensuring that tourism generates long-term economic benefits for local communities.

The broader discourse around sustainable tourism emphasizes the need for a multifaceted approach, one that integrates various initiatives, such as job creation, environmental preservation, climate change mitigation and the promotion of sustainable consumption patterns. Carvalho (2010) argues that the contemporary tourism paradigm is increasingly shaped by discerning travelers who seek authentic experiences, uniqueness, and social responsibility. This shift in traveler expectations aligns with the need for sustainable tourism practices that not only meet these demands but also contribute positively to the destinations they visit.

Streimikiene et al. (2020) echo this sentiment, stressing the importance of raising tourist awareness and spreading sustainable tourism practices. They highlight the challenge of harmonizing the environmental, economic, and social dimensions of sustainability while maintaining the competitiveness of tourism destinations. Achieving this balance requires holistic and strategic approaches that consider the long-term impacts of tourism on local communities and ecosystems.

In essence, sustainable tourism development calls for an integrated strategy that aligns the interests of tourists, local communities, and the environment. The rapid resurgence of international tourism post-pandemic presents both a challenge and an opportunity. While the industry's recovery is a positive sign of resilience, it also underscores the urgency of adopting sustainable practices to ensure that this growth does not come at the expense of ecological and cultural integrity.

As tourism continues to expand, the need for sustainable development practices becomes increasingly critical. The work of Ritchie and Crouch (2011), Carvalho (2010), and Streimikiene et al. (2020) collectively highlights the necessity of balancing growth with sustainability. This involves not only protecting the natural and cultural resources that make destinations attractive but also ensuring that tourism contributes to the well-being of local communities. Sustainable tourism development, therefore, is not just about preserving what is, but about fostering what could be a tourism industry that thrives in harmony with the world it seeks-to-explore.

2.3.3 UN agenda 2030 and the Sustainable Development Goals

The United Nations 2030 Agenda for Sustainable Development offers a visionary roadmap encapsulated in 17 Sustainable Development Goals (SDGs) (cf: annex A), which collectively advocate for a balanced approach to global development. These goals emphasize the critical need to improve social equality, foster economic growth and preserve environmental well-being, creating a comprehensive framework aimed at addressing the world's most pressing challenges.

Sustainable tourism is increasingly recognized as a vital industry in advancing several of these SDGs. The sector aligns particularly well with goals focused on promoting economic growth through job creation (SDG 8), fostering innovation and infrastructure development (SDG 9) and advocating for sustainable consumption and production practices (SDG 12). Furthermore, tourism's role in supporting the conservation and sustainable use of marine (SDG 14) and terrestrial ecosystems (SDG 15) underscores its potential to contribute meaningfully to both ecological sustainability and community well-being. (UNWTO, 2024)

However, the successful integration of the SDGs into the tourism sector requires more than broad alignment; it demands that these global goals be translated into actionable policies at both grassroots and national levels. As Hall (2019) and Gössling et al. (2012) suggest, the effectiveness of implementing these goals depends significantly on tailoring them to fit local contexts. For example, countries with rich natural resources but fragile environments can use the SDGs as a blueprint for balancing economic growth with environmental protection, thereby preserving their natural heritage while promoting sustainable development.

In this topic, the involvement of a broad range of stakeholders government bodies, private sector actors, local communities and international organizations is essential for sustainably managing tourism development. Bramwell (2011) and Buckley (2012) emphasize that this collaborative approach not only helps align policies with global objectives but also ensures their effective implementation. By engaging diverse stakeholders, sustainable tourism can be harnessed to benefit local economies while simultaneously safeguarding environmental and cultural assets.

Nevertheless, Biermann et al. (2017) and Liburd & Becken (2017) highlight the challenges of harmonizing the SDGs with the practical realities faced by individual regions. They argue that for successful integration into tourism strategies, it is crucial for regional policymakers to adapt these ambitious global goals to their specific local contexts. This process involves translating the SDGs into practical, measurable strategies that can be effectively implemented on the ground. The governance-through-goals approach adopted by the SDGs is praised for its flexibility, as noted by Patterson et al. (2017) and Young (2017). This approach allows for a non-confrontational, country-driven adoption of the goals, enabling them to dynamically adjust to changing economic, social and environmental conditions—a feature that is vital for responding to unforeseen challenges and capitalizing on emerging opportunities during the SDGs' timeline.

Therefore the SDGs provide a robust framework for promoting sustainable tourism that can lead to significant socio-economic benefits and environmental conservation. Weaver (2011) and Saarinen (2013) suggest that by strategically integrating tourism development strategies with these goals, tourism can serve as a powerful engine for economic prosperity, while also playing a crucial role in fostering social inclusion and environmental sustainability. This global commitment to the SDGs, supported by extensive research and international dialogue, presents a promising pathway where sustainable tourism supports broad-based economic development, enhances social cohesion and preserves the environment.

In conclusion, the comprehensive approach of the SDGs underscores the necessity of moving beyond traditional economic development models. The framework advocates for a holistic approach that effectively incorporates the needs of people, the planet and shared prosperity. As the global community works towards achieving these goals, the tourism sector, with its unique intersection of economic, social and environmental impacts, stands as a critical player in shaping a more sustainable future.

2.4 Theoretical foundations

The interrelated concepts of place attachment, place identity, place loyalty and destination image have been the subject of extensive academic inquiry, each contributing to a nuanced understanding of how individuals relate to their environments. These concepts, while distinct, collectively form the foundation for the broader notion of "Centrality to Lifestyle," which reflects how these deep connections to specific places influence both individual behaviors and broader societal and environmental outcomes.

2.4.1 Place attachment

Humans form mental connections, with particular places known as place attachment according to Proshansky et al.'s 1983 research. Pioneer work in this area emphasizes that these bonds go beyond mere affection and become essential to a person's identity and happiness. The study suggests that place attachment involves a intricate blend of emotional connections, cognitive beliefs and behaviors directed towards locations that carry personal meaning. The connections, to these locations are strongly tied to experiences and recollections that imbue significance to these spots and impact how people engage with them and view themselves in these surroundings.

In the surfing world we see this a lot. Surfers really connect with spots because of the bond they feel with the waves there; it's a deep feeling that keeps bringing them back and influences how they view those places in nature (Anderson, 2014). The importance of connecting with surfers through marketing strategies that acknowledge their attachment to favorite surfing spots is crucial, for promoting sustainability, in surf tourism (O'Brien 2013).

Expanding upon this core theory, Williams and Vaske (2003) delved into the consequences of ties to places by highlighting how a strong attachment to a location can drive heightened conservation initiatives and greater participation in environmental advocacy efforts based on their study findings. They found that individuals forming an connection with a specific place tend to actively support its preservation and adopt actions that foster its long term well being. This feeling of responsibility towards safeguarding locations can have an influence, on community attitudes and actions related to environmental protection.

The concept of using connections, to locations to promote environmental conservation is especially important in the surf tourism sector. Marketing professionals and government officials can develop strategies that not cater to surfers' affection for their surfing destinations but also inspire them to support conservation projects and opt for environmentally friendly surfing gear. By coordinating activities, with the emotional bonds surfers hold with their surf spots the industry can nurture a sustainability focused environment that deeply connects with its target audience.

Vaske and Kobrin's study, in 2001 backs the link between connection to a place and engaging in eco actions according to their research outcome showed that people who have a deep bond with a specific location tend to embrace practices that safeguard and preserve it better. This correlation implies that feelings of attachment can play a role in encouraging behaviors. Policymakers and educators can leverage this understanding to create approaches that strengthen these connections leading to more sustainable interactions, between communities and their surroundings.

In their study, from 2003, Kyle and colleagues delved into the idea of place attachment by examining how engaging in activities such as hiking can strengthen these bonds. According to their research conducted among hikers on the Appalachian Trail it was observed that individuals who were highly engaged in hiking established practical connections with the trail compared to those who participated casually. This study underscores the notion that involvement in activities, within a place has the power to elevate these locations from backgrounds to significant components of people's lives and sense of self. The fact that people often depend on these locations for their enjoyment and leisure emphasizes the significance of preserving these spaces since they greatly influence the personal narratives and sense of self of those who appreciate them.

In the surfing world, as in other communities devoted to the sport of surfing spending time engaging in surfing activities at particular beaches can strengthen surfers' bond with these places. This bond then impacts their decisions to conserve and interact sustainably with ecosystems. These observations play a role in creating conservation projects driven by communities, at well known surfing destinations to guarantee that the beloved natural habitats of surfers remain safeguarded for the next generations to enjoy.

As research delves further into the concept of place attachment and its impact, on happiness and environmental conservation efforts well as community participation and cultural legacy (Williams & Vaske 2003) we gain a deeper understanding of how strong connections, to specific locations shape human actions and community beliefs as emphasized by the works of Lewicka (2008). The knowledge gained from these observations forms a basis, for enhancing city planning efforts and environmental awareness while encouraging behaviors through recognizing the emotional and mental connections people have with their surroundings, in shaping plans that benefit personal and community welfare collectively.

2.4.2 Place identity

The concept of place identity has gained substantial attention in academic circles since Buttimer's (1980) seminal work, which underscored the profound functional and emotional significance of one's home and geography on personal identity and well-being. Buttimer's insights laid the foundation for understanding how places are not merely backdrops to our lives but are integral to sustaining personal identity. This early work spurred a wealth of research exploring the influence of place identity on various aspects of human behavior, including brand relationships.

Proshansky et al. (1983) expanded the concept of place identity by describing it as a sub-structure of personal identity that is intricately woven through memories, ideas and feelings associated with a place. This understanding positions place identity as essential for self-definition, influencing how individuals perceive themselves and interact with the world. Williams and Vaske (2003) further developed this idea by demonstrating that place identity can enhance self-esteem, provide a sense of belonging and offer psychological benefits such as reduced anxiety, consistency, privacy, control and security. These factors are not only crucial for personal well-being but also significantly impact consumer decisions and lifestyle behaviors, making place identity a vital consideration in consumer behavior research.

The influence of place identity on consumer behavior extends into the realm of marketing, where it shapes how individuals interact with brands and make purchasing decisions. The integration of place identity into daily life has been explored through various marketing strategies that seek to resonate with consumers' emotional and cognitive attachments to specific locations. Neuroscientific research by Lengen and Kistemann (2012) has begun to uncover how place-related experiences trigger emotional and cognitive responses that influence brand perception and consumer loyalty, highlighting the importance of place identity in shaping consumer behavior.

Twigger-Ross, Bonaiuto, and Breakwell (2003) utilized Breakwell's Identity Process Theory to explain how places become integral to people's identities. They emphasized that places offering feelings of distinctiveness, continuity, self-efficacy and self-esteem are more likely to be assimilated into an individual's identity. This theory helps explain why people become more psychologically invested in places where they spend significant time, often leading these places to become central to their identities, especially when they are well-integrated into these communities (Breakwell, 1993; Anton & Lawrence, 2014; Hidalgo & Hernandez, 2001). For surfers, the places where they regularly surf often become central to their identities, influencing not only their choice of residence but also how they interact within their communities. The cultural and environmental attributes of surfing locations play a significant role in shaping a surfer's identity and their involvement in the local community.

The connection between place identity and environmental stewardship is also evident in the work of Lin and Lockwood (2014), who explored how individuals attached to specific places actively participate in protecting them. Their research shows that people who feel a strong sense of place identity are more likely to engage in campaigns against developments perceived as threats to their cherished environments. This protective behavior underscores the powerful influence of place identity on both personal and collective actions, particularly in the context of environmental conservation.

The concept of place identity naturally extends into the notion of place loyalty, which reflects how emotional and cognitive attachments to a place translate into loyal behaviors, such as frequent revisits or recommendations. This is particularly relevant in marketing and consumer behavior, where understanding the deep attachments that individuals have to specific locations can inform strategies aimed at fostering brand loyalty and consumer engagement.

According to the authors, place identity is a crucial element in understanding how people connect with their surroundings and how these connections influence their behavior, seeking to leverage the power of place identity to enhance consumer engagement, promote environmental stewardship and foster a deeper sense of community.

2.4.3 Place loyalty

The concept of place loyalty, which has its roots in the foundational explorations of emotional connections to places by Relph (1976) and Tuan (1977), has evolved into a significant area of study within the broader discussions of place attachment and identity. Place loyalty represents the behavioral dimension of our relationship with places, encompassing the propensity to revisit and recommend locations based on previous positive experiences. This concept has garnered increasing attention, particularly within the context of tourism, where it plays a crucial role in influencing the popularity and economic sustainability of destinations.

In the field of surf tourism, place loyalty is strongly illustrated by surfers' frequent returns to favored surf spots and their enthusiastic recommendations of these locations to others within the surfing community. This loyalty not only enhances the tourism value of these destinations but also fosters a collective responsibility among surfers to protect and sustain the environments they cherish. The interplay between place loyalty and sustainable practices underscores the importance of understanding this phenomenon in order to promote the long-term viability of surf tourism.

Oppermann (2000) was instrumental in advancing the understanding of place loyalty, emphasizing that it extends beyond simple habitual actions. He argued that place loyalty is deeply rooted in positive experiences, which not only encourage return visits but also lead to the sharing of these experiences with others. This behavioral aspect of place loyalty is pivotal in the tourism sector, where it contributes significantly to the economic sustainability and popularity of destinations. Oppermann's insights suggest that place loyalty reflects a deep commitment to a location, creating a lasting relationship that transcends immediate satisfaction and fosters enduring connections.

Methodological advancements in the 1990s and early 2000s further deepened the understanding of place loyalty. For example, Kyle et al. (2004) developed quantitative measures to assess loyalty in natural settings, such as parks and recreational areas. Their research revealed that place loyalty involves not just frequent revisitation but also encompasses emotional bonds and identity-related dimensions.

This indicates that visitors with strong place loyalty are more likely to engage in conservation efforts and advocate for the preservation of the place. Kyle et al.'s work underscores the importance of emotional and identity-based connections in fostering loyalty, suggesting that these factors are integral to promoting sustainable tourism practices.

Lewicka (2011) added another dimension to the discussion by demonstrating how long-term residents develop strong loyalty to their neighborhoods, significantly influencing their participation in local activities and resistance to relocation. Her research points to the substantial social implications of place loyalty, suggesting its importance for community developers. Lewicka's findings highlight that place loyalty is not just a personal attachment but a social phenomenon that can drive community engagement and cohesion.

Raymond, Brown, and Weber (2010) further explored the link between place loyalty and ecological behaviors, showing that strong loyalty to a place encourages behaviors that protect and enhance the environment. This relationship is crucial for understanding the potential of place loyalty to contribute to sustainable environmental practices. Their research aligns with the broader discourse on place loyalty, reinforcing the idea that emotional and cognitive attachments to a place can translate into concrete actions that benefit the environment.

Stedman (2002) offered a perspective by focusing on how perceptions of environmental quality impact place loyalty. He argued that perceived high environmental quality enhances place loyalty, which in turn motivates greater community involvement and environmental stewardship. Stedman's work suggests that improving environmental quality can be an effective strategy for fostering place loyalty and encouraging more sustainable community behaviors. His findings resonate with the earlier discussions by Raymond et al. (2010) and Lewicka (2011), who also emphasize the role of place loyalty in promoting environmental and social sustainability.

Collectively, these studies present a comprehensive view of place loyalty as a complex phenomenon influenced by emotional, cognitive and social factors. They articulate the significance of place loyalty in motivating individuals to maintain, protect and advocate for the places they care about. For marketers, community leaders and environmental planners, the insights from this body of research suggest that fostering place loyalty is a strategic approach to enhancing community engagement, promoting sustainable behaviors and ensuring the long-term viability of both natural and urban environments.

The evolving understanding of place loyalty underscores its importance in a wide range of applications, from tourism marketing to community development and environmental conservation. By recognizing the deep connections people form with places, stakeholders can develop more effective strategies to engage individuals, encourage positive behaviors and sustain the environments that are integral to their identities and well-being. This literature review highlights the critical role of place loyalty in shaping human behavior and societal outcomes, providing a valuable framework for future research and practical interventions.

2.4.4 Destination image

The concept of "destination image" is crucial in tourism studies as it significantly influences tourists' choices and their overall experience. Understanding how tourists perceive a destination can shape their decision to visit and their satisfaction after the visit. This concept has been explored extensively since Crompton (1979), which highlighted the impact of cognitive evaluations and affective feelings on tourist decisions. Crompton's research laid the groundwork for understanding the significant role these perceptions play in influencing tourists' choices and satisfaction levels, setting the stage for future investigations into destination image.

For surf tourism, the image of a surf destination can significantly influence its attractiveness. Factors such as wave quality, local culture and environmental sustainability practices play critical roles in shaping this image. Efforts to maintain and enhance these attributes can boost a destination's image, attracting more surfers and promoting sustainable tourism practices.

Marketers can leverage a positive destination image to attract surf tourists looking for quality surf experiences in environmentally responsible destinations. Effective marketing strategies should highlight the unique characteristics of surf spots and their commitment to sustainability to align with the values of the surfing community.

Further expanding on these foundational concepts, Echtner and Ritchie (1991) introduced a comprehensive model that considers both tangible attributes and emotional responses associated with destinations. Their dual approach significantly advanced the understanding of the multifaceted nature of destination image by integrating both broad and specific elements. This framework has guided subsequent research, emphasizing the complexity of how destinations are perceived and the need for nuanced approaches in studying them.

As methodologies evolved through the 1990s and early 2000s, researchers like Gallarza, Saura, and García (2002) delved deeper into how destination images influence visitor behavior and destination selection. They noted the dynamic nature of destination image, shaped continuously by factors such as promotional efforts, media portrayals, and personal experiences. This understanding has emphasized the need for innovative methods to accurately capture the changing perceptions of potential tourists.

The exploration of how various factors influence destination image continued with Dwyer and Kim (2003), who further analyzed the impact of destination image on tourist behavior. Their research underscored the importance of understanding tourist perceptions to develop effective marketing strategies, ensuring that destinations remain competitive in the global market. Tasci, Gartner, and Cavusgil (2007) examined the practical implications of destination image theories for tourism marketing. They discussed the importance of strategic image management in enhancing the competitiveness and attractiveness of tourism destinations, highlighting the direct connection between theoretical research and practical application for destination marketing-organizations.

Overall, the literature on destination image shows a progression from basic theories to more sophisticated analyses that consider a range of influencing factors and outcomes. The study of destination image not only enriches academic understanding but also provides essential insights for practitioners in tourism management and marketing. This ongoing research is crucial for ensuring that destinations can effectively align their image with tourist expectations and preferences, fostering successful tourism practices.

2.4.5 Centrality to lifestyle

Centrality to lifestyle can be defined as the centrality of an activity exercised or practiced in a specific place with unique characteristics relevant to that activity (Altman & Low, 1992). This concept integrates the emotional, cognitive, and behavioral dimensions of place attachment, identity, loyalty, and destination image, offering a holistic lens through which these interconnected elements can be viewed.

Exploring the intricate relationships that individuals form with places is vital across various disciplines such as environmental psychology and tourism marketing. Through key concepts such as place attachment, place identity, place loyalty and destination image, we can delve into and dissect these complex interactions. Moreover, introducing the concept of centrality to lifestyle as a prism through which these dimensions are viewed offers a holistic lens to see how they interconnect and shape both individual and communal experiences within specific contexts.

From our discussions, place attachment has emerged as a foundational element, characterized by the emotional and cognitive bonds that individuals form with specific locations. As seen, this attachment profoundly influences personal identity and well-being, driving individuals to engage in environmental conservation and community activities, thereby enhancing their connection to the place (Williams & Vaske, 2003).

We've also discussed how place identity integrates geographical settings into personal identity, enriching life experiences and influencing choices and behaviors. This dimension extends beyond the physical attributes of a place, reflecting the emotional and functional activities that are essential for sustaining personal identity (Proshansky et al., 1983).

Place loyalty, as explored, represents a behavioral dimension that evolves from the emotional and identity-based connections previously discussed. It involves a deep-seated commitment to revisit and advocate for places that hold significant personal value, often driven by satisfying experiences (Oppermann, 2000). This loyalty not only enhances the tourism value of destinations but also promotes sustainable practices within those communities.

Destination image is crucial in how potential visitors perceive a location, significantly affecting their decision-making and satisfaction levels. It incorporates both tangible attributes and emotional responses, illustrating how marketing strategies must adapt to align destination images with visitor expectations (Echtner & Ritchie, 1991).

Centrality to lifestyle emerges as a comprehensive construct informed by the interplay of place attachment, identity, loyalty and destination image. It encapsulates the essence of how individuals integrate their surroundings into their lifestyle, affecting everything from daily interactions to long-term commitments (Chang & Gibson; 2015). This concept highlights the importance of understanding the multi-dimensional relationships individuals form with their environments. By enhancing the control of these relationships, policymakers, marketers and community planners can devise strategies that cater to the individual preferences while fostering sustainable practices that enhance community well-being and promote environmentally responsible behaviors.

Understanding the centrality to lifestyle requires a deep appreciation for how places influence personal identities and behaviors beyond geographic or physical interactions. It includes the emotional, cognitive and social threads that connect individuals to their environments, dictating lifestyle choices and community engagement. (Arlinghaus & al 2020). This concept is particularly relevant in contexts like sustainable living and tourism, where aligning individual lifestyles with environmental and cultural values significantly impacts conservation efforts and community welfare. For instance, a surfer's deep connection to a coastal community can inspire active participation in preserving its natural beauty and integrity, enhancing both their life quality and the sustainability of the community. (Ponting, 2023)

Exploring the concepts of place attachment, place identity and place loyalty has revealed profound insights into how deeply people are connected to their surroundings. Lewicka (2011) These concepts, while distinct, are deeply intertwined, painting a rich picture of the dynamic interactions between individuals and their environments.

Place attachment underscores the emotional and behavioral connections that foster a profound sense of belonging and a commitment to environmental conservation. Place identity builds on this by showing how our environments shape who we are, enriching our life experiences and influencing our choices and behaviors. (Anton, C. E., & Lawrence, C. 2016). Place loyalty extends these ideas into the realm of ongoing engagement and advocacy, showing a deep commitment to the places we love, which significantly impacts both tourism and community vitality. (Stedman, 2002)

Additionally, the concept of "centrality to lifestyle" serves as a crucial lens through which we can view all these dimensions. It encapsulates how place attachment, identity and loyalty are not just passive experiences but are central to our daily lives and interactions. This concept highlights the critical role that environments play in shaping our lifestyles, affecting everything from our daily routines to our long-term decisions. (Van den Heuvel et al., 2022)

Understanding the centrality of place in our lifestyles is not just an academic exercise; it has real world implications for policymakers and marketers. By enhancing our understanding of place attachment and identity, and fostering place loyalty, we can promote sustainable behaviors and ensure the enduring appeal and livability of our communities and destinations. This holistic approach does more than enrich academic discussions; it offers practical insights that can help us build more engaging, sustainable and interconnected communities.

2.5 Hypotheses development

2.5.1 Community engagement and its impact on word of mouth among surfers

-Community engagement is a multifaceted concept that plays a pivotal role in both individual and collective well-being. Delanty (2003) categorizes communities into geographic and choice-based groups, further subdividing them into communities of place, activity-based groups, and belief-based communities. These categories highlight the complexity of community structures, which are essential in fostering a sense of belonging (Douglas, 2010; Kawachi et al., 1999). However, the relationship between community engagement and individual well-being is not universally agreed upon. While Douglas (2010) and Kegley (1997) emphasize that interaction and communication within communities directly enhance well-being, other scholars suggest that the benefits derived from community engagement can be more nuanced, depending on the type of community and the level of individual involvement.

Bourdieu (1986) introduces the concept of social capital, describing it as the aggregate of resources connected to a durable network of relationships. He argues that building community involves active participation in communal activities, which fosters connections and social mobility. This idea aligns with Douglas (2010), who views active engagement as crucial for gaining influence within a community. Although, the extent to which social capital translates into tangible benefits, such as influence over community decisions, remains a subject of debate. Some argue that the potential for social mobility and influence is contingent upon pre-existing social structures and individual agency, suggesting that not all forms of community engagement yield the same outcomes.

In coastal areas, often termed "blue spaces," the interaction between community engagement and environmental stewardship becomes particularly evident. These spaces are recognized for their therapeutic benefits, which include physical, psychological, social, and spiritual well-being (Gesler & Kearns, 2002; Britton & Foley, 2020). The role of maritime leisure activities, such as surfing, in fostering these benefits is well-documented (Collins & Kearns, 2008). Despite that, the extent to which these activities contribute to broader environmental engagement is contested. While some researchers, like Collins & Kearns (2008), highlight the cultural and economic importance of these activities, others argue that the focus on leisure can sometimes overshadow more critical aspects of environmental sustainability.

Surfers, as a distinct subgroup within these coastal communities, are often seen as active participants in environmental protection efforts. Organizations like the Surfrider Foundation and Surfers Against Sewage have been instrumental in mobilizing surfers for coastal conservation (Touren-Gardic et al., 2020). For instance, the creation of the Piedra del Viento Coastal Marine Sanctuary in Chile, driven by surfer-led advocacy, underscores the potential of this community to influence environmental policy (Save the Waves, 2019/2020 Impact Report). Nevertheless, this activism is not universally representative of all surfers. While some are deeply committed to environmental causes, others may be more focused on the recreational aspects of surfing, raising questions about the consistency and depth of environmental engagement within the surfing community.

The cultural dimensions of surfing extend beyond the sport itself, contributing to social cohesion and community identity. Research indicates that surfing positively impacts mental health and fosters a sense of belonging (Suendermann, 2015; Wheaton et al., 2021). Yet, this perspective is challenged by studies that portray surfing as a solitary and individualistic pursuit (Buckley et al., 2019). The contrast between these views suggests that the social benefits of surfing may vary significantly among individuals, depending on personal motivations and community connections. Moreover, the strong environmental consciousness often associated with surfers may not be as widespread as some studies suggest. While many surfers do exhibit pro-environmental behaviors, such as coastal preservation and ocean literacy (Fox et al., 2021; Lazarow, 2010), this does not universally translate into active environmental advocacy.

The interaction between community engagement and word of mouth (WOM) is critical in shaping consumer behavior, particularly in niche communities like surfers. WOM is a powerful tool for sharing both positive and negative experiences, influencing consumer behavior, attitudes, and decision-making processes (Anderson, 1998; Chaniotakis & Lymperopoulos, 2009). But, the credibility and impact of WOM are not consistent across all contexts. While Brown & al. (2007) and Gruen et al. (2006) argue that WOM is more persuasive than traditional advertising, others suggest that its effectiveness is heavily dependent on the source and context of the information shared. In the digital age, where WOM has expanded to online platforms, the dynamics of influence have become even more complex, with factors like source similarity and platform credibility playing a significant role (Fallows, 2005; Peterson & Merino, 2003).

In the context of environmental sustainability, "green WOM" has emerged as a crucial element in promoting eco-friendly products and influencing green purchase intentions (Oliver & Lee, 2010). Even so, the effectiveness of green WOM is vulnerable to practices like greenwashing, which can undermine consumer trust. Guerreiro and Pacheco (2021) highlight that greenwashing negatively impacts green purchase intentions by diminishing the effectiveness of green WOM. This finding aligns with broader concerns about the reliability of environmental claims and the potential for consumer skepticism to erode the impact of WOM in promoting sustainability.

Given the strong community engagement observed among surfers, particularly in their environmental advocacy, it is essential to explore how this engagement influences their willingness to spread word of mouth within their communities. This leads to the hypothesis:

H1: Community engagement has a positive effect on word of mouth among surfers.

Exploring this hypothesis could provide valuable insights into the social and economic dynamics within surfing communities, particularly in how community-driven initiatives can amplify positive consumer behaviors and environmental stewardship.

2.5.2 Green Attachment and Its Influence on Community Engagement

The therapeutic value of "blue spaces," such as oceans, rivers, and lakes, has been increasingly recognized in recent years, with scholars like Britton (2019), Evers & al (2022). and Foley & al. (2019) underscoring the profound impact these environments can have on human well-being. They argue that activities like surfing and swimming do more than provide physical exercise; they foster deep emotional and psychological connections with the natural world. This connection, as Wheaton & al. (2017) further explain, is a key component in the formation of a sense of place, where individuals feel a strong attachment to the environment that surrounds them. Such attachment is not only beneficial for personal well-being but also plays a crucial role in forming and strengthening community bonds, particularly within coastal regions where these activities are prevalent.

This idea of a deep connection to natural spaces is closely related to the concept of "green attachment," where individuals develop a strong emotional bond with the environment. Zhang et al. (2015) suggest that green attachment often manifests as a heightened concern for environmental issues. This concern is more than just an abstract feeling; it drives concrete actions; influencing behaviors such as the preference for eco-friendly products and active participation in environmental conservation efforts. In this way, green attachment becomes a critical factor in promoting sustainable practices within communities.

However, as Chang (2011) notes, the potential of green attachment to drive sustainable behaviors is heavily dependent on the credibility of the environmental claims made by brands and products. In an era where "green" has become a powerful marketing buzzword, mostly labeling a product as environmentally friendly is insufficient. Consumers, increasingly clever and informed, demand transparency and accuracy in these claims. Straughan and Roberts (1999), emphasize that to truly engage consumers, green claims must be supported by clear, truthful, and accurate information. This is where the concept of "green trust" comes into play.

Green trust, as described by Gefen and Straub (2004) and Schlosser and al. (2006), is the foundation upon which environmentally conscious purchasing decisions are built. It represents the consumer's belief in the credibility and benevolence of a brand's environmental claims. When consumers trust that a product is genuinely green, they are more likely to purchase it and recommend it to others. Sichtmann (2007) further argues that this trust reduces the perceived risk of recommending a product, thereby enhancing positive WOM. This is particularly important in the context of environmental sustainability, where consumer trust can significantly amplify the impact of green marketing efforts.

Conversely, the practice of greenwashing where companies exaggerate or falsify their environmental claims poses a significant threat to green trust. Chen and Chan (2014) highlight how greenwashing erodes consumer trust, leading to skepticism not only toward the offending brand but also toward green products in general. Guerreiro and Pacheco (2021) extend this argument by demonstrating that greenwashing indirectly diminishes green purchase intentions through its negative impact on green WOM. This finding underscores the importance of maintaining integrity in environmental claims to preserve the positive influence of green attachment on consumer behavior.

The parallels between the effects of blue spaces and green attachment are striking. Just as Britton (2020), Brown & Humberstone (2015) illustrate how immersion in blue spaces like oceans and rivers can lead to a strong sense of place and community, green attachment fosters a similar connection to the natural environment. This attachment can significantly enhance community engagement, as individuals who feel a deep connection to nature are more likely to take an active role in community efforts to protect and preserve these spaces. Fox et al. (2021) and Lazarow (2010) note that this sense of attachment can lead to pro-environmental behaviors, such as participating in local conservation initiatives or advocating for sustainable practices within the community.

Moreover, this connection between green attachment and community engagement is not just about individual actions; it extends to collective efforts that can have a broader impact. As seen in the work of the Surfrider Foundation and other environmental organizations, communities with strong environmental attachments often mobilize around shared goals of conservation and sustainability. These efforts are not only beneficial for the environment but also strengthen the social fabric of the community, fostering a sense of solidarity and shared purpose.

The importance of this relationship cannot be overstated. As individuals become more attached to their natural environment, their willingness to engage in community activities that support environmental stewardship increases. This engagement, in turn, reinforces the community's collective commitment to sustainability, creating a positive feedback loop where attachment leads to action, and action further deepens attachment.

Given these insights, it is reasonable to hypothesize that:

H2: Green attachment has a positive effect on community engagement.

This hypothesis suggests that the emotional bonds individuals form with nature are not merely personal sentiments but are powerful drivers of community involvement and environmental advocacy. As communities become more engaged, their capacity to influence environmental outcomes and promote sustainable practices grows, highlighting the critical role of green attachment in fostering a proactive and engaged society dedicated to preserving the planet.

2.5.3 Word of Mouth and Its Impact on Sustainable Purchase Intentions

Word-of-mouth is a powerful communication tool that plays a crucial role in shaping consumer behavior and decision-making processes. WOM involves verbal exchanges between consumers and various stakeholders, including producers, experts, friends, and relatives, and can convey both positive experiences (positive WOM) and negative experiences (negative WOM). Anderson (1998), Chaniotakis & Lympieropoulos (2009) emphasize that this form of communication significantly influences consumer attitudes and behaviors. WOM is particularly effective because it often carries a high level of credibility, which stems from the perceived impartiality of the sources, whether they are friends, family, or fellow consumers.

The influence of WOM is especially pronounced when consumers are seeking information to mitigate perceived risks before making a purchase. Bettman (1973) and Srinivasan & Ratchford (1991) point out that in these scenarios, WOM becomes a critical source of information that can shape consumer attitudes, influence risk-taking behaviors, and affect product judgments. The persuasive power of WOM is further highlighted by Brown & al. (2007) who argue that it often has a deeper cognitive impact than traditional advertising, leading to more significant effects on consumer decision-making.

In the context of environmental sustainability, WOM has evolved into "green WOM," where consumers share positive environmental messages related to products and brands. Chen & al. (2014) explains that green WOM plays a crucial role in influencing green purchase intentions, which refer to the likelihood and willingness of a consumer to choose environmentally friendly products over traditional ones. This form of communication is vital in promoting green consumerism, which involves purchasing and using products that have minimal environmental impact (Paul, Modi, & Patel, 2016). Green products, as defined by, are those that do not contaminate nature and can be reused, thereby reducing the overall environmental footprint.

The importance of green consumerism has been growing, particularly as environmental concern has become a central issue since the 1990s). Joshi and Rahman (2015) suggest that consumers who are more aware of the green purchase process are more likely to make ecological conscious decisions, driven by a heightened sense of nature related responsibility. This aligns with Kalafatis & al. (1999), who describe ecologic concern as an awareness of the dangers facing the environment and the limitations of natural resources. Such awareness, also termed green awareness, involves understanding the sustainable impacts of products and evaluating their benefits in the context of environmental sustainability (Akbar & al., 2014).

The connection between WOM and green purchase intentions is further reinforced by the fact that consumers who are deeply concerned about the environment not only make eco-friendly purchasing decisions but also influence others' behaviors through WOM. Chen and Peng (2012) argue that individuals with a strong green concern feel a moral obligation to protect natural resources and spread awareness about eco-friendly products. This behavior creates a ripple effect, where the environmental consciousness of one consumer can lead to broader changes in the purchasing behaviors of others within their social network.

Moreover, positive WOM is often driven by high levels of consumer satisfaction, which De Matos & Rossi (2008) identify as a key determinant in the spread of positive recommendations. Informal WOM, characterized as a two-way exchange among customers, friends, or even strangers, is recognized as a powerful tool for shaping consumer opinions and driving purchase decisions. When consumers engage in positive post-purchase conversations, their satisfaction with the product tends to increase, further reinforcing their commitment to the brand and its green-credentials-(Jalilvand-&-Samiei,-2012).

However, the effectiveness of green WOM can be undermined by practices such as greenwashing, where companies exaggerate or falsify their ecological claims. Guerreiro and Pacheco (2021) highlight that greenwashing diminishes the credibility of green claims, leading to a reduction in both green WOM and green purchase intentions. This suggests that for WOM to positively influence sustainable purchase intentions, it must be built on a foundation of trust and authenticity in the brand's messaging.

In the broader context of sustainable consumer behavior, the role of WOM becomes even more critical. Lee & al (2020) demonstrate that the highest purchase intentions occur when consumers are presented with both a sustainable label and traceability information. They also note that consumer knowledge about certifications enhances the effectiveness of eco-friendly labels. This finding aligns with the broader literature, which suggests that enhancing consumer knowledge and providing transparent environmental cues can significantly boost sustainable purchase intentions.

Given these insights, it is reasonable to hypothesize that:

H3: Word of mouth has a positive effect on sustainable purchase intentions.

This hypothesis suggests that WOM, particularly when it conveys credible and positive sustainable messages, plays a crucial role in influencing consumers to choose sustainable products. As consumers become more informed and engaged through WOM, their likelihood of making eco-conscious purchase decisions increases, further promoting green consumerism and sustainability.

CHAPTER 3

Data analysis

The research included 140 individuals who were selected to investigate the behaviors and attitudes of surfers towards sustainability and eco practices. There was a mix of traits, among the participants chosen for the study to ensure a well rounded and varied representation of the surfing community. This approach aimed to improve the credibility and applicability of the findings gathered.

The data includes 51 % men and 46 % women with the remaining 2 % classified as others. A representation that aims to prevent gender bias and enables an exploration of any variances, in sustainable consumption behaviors among men and women, within the surfing industry.

The largest group of survey participants are, in the 18 to 24 age bracket (42%) followed by those aged 25 to 34 (27%). Participants in the 35 to 44 age range make up 14% while individuals between 45 and 54 years old make up around 11%. Lastly individuals over the age of 55 account, for 6%.

The noticeable representation of adults, in this group provides insights into the views of the younger generation regarding environmental and sustainability concerns, within the realm of sports. The participants, in the study seem to be quite educated with a number holding a Masters degree at 40%. Additionally 34% of them possess a Bachelors degree while 10% have completed a technical or vocational program and 5% have attained a PhD. Lastly almost 9% of participants have finished secondary education. The varying levels of education play a role, in shaping how people perceive and embrace eco practices within the surfing community.

In the group of individuals involved in the study; 52 % are workers; 20 % are students; and 13 % work, for themselves, as contractors or business owners; retirees make up 6 %; those looking for work account for 3 %; while entrepreneurs represent another 6 % of the participants. The variety of roles, among individuals enables a study of how job types and work duties could influence peoples willingness to participate in eco actions by considering their buying habits and interest, in sustainable products. The study includes a range of locations globally; attendees hail from parts of the world mainly, in Europe and North America. This diversity in geography provides an comparative outlook on consumer actions within the surfing sector based on their settings and engagement with ecological projects, in the area.

Analyzing a Sample; An Overview of the Study. This particular example covers a range of individuals in terms of gender balance and age groups, with varying levels of education which enables an examination of sustainable consumption habits, in the surfing industry.

The varied backgrounds and expertise of the participants enrich the findings by showcasing how outcomes may vary based on their social environments. Moreover the diverse makeup of the sample enables conclusions to be drawn while also facilitating comparisons among subgroups.

This group of individuals is well equipped to explore the research queries about buying intentions and eco friendly actions within the surfing community while taking into account sociodemographic factors.

	N	%
Gender		
Male	72	51.43%
Female	65	46.43%
Other	3	2.14%
Age		
18-24	59	42.14%
25-34	38	27.14%
35-44	18	12.86%
55 or older	12	8.57%
45-54	12	8.57%
Under 18	1	0.71%
Education		
Master's degree (+5)	57	40.71%
Bachelor's degree (+3)	48	34.29%
Secondary School Certificate of education advanced	14	10.00%
Technical college degree (+2)	13	9.29%
PHD (+7)	4	2.86%
Bachelor's degree	2	1.43%
Master's degree	1	0.71%
Primary school	1	0.71%

Table 1: Respondent Demographics

3.1 Statistical analysis

To test our conceptual model, structural equation modelling (SEM) was used. More specifically, partial least squares (PLS) were used, which is a variance-based structural equation modelling technique, by means of SmartPLS 3 software (Ringle et al., 2015). The analyses and interpretation of the results followed a two-stage approach. The reliability and validity of the measurement model was first evaluated and then assessed the structural model.

The first analysis conducted is the reliability of the measures used.

To assess the quality of the measurement model, the individual indicators of reliability, convergent validity, internal consistency reliability and discriminant validity were examined (Hair et al., 2017). The results showed that the standardized factor loadings of all items were above 0.6 (with a minimum value of 0.732 and were all significant at $p < 0.001$, which provided evidence for the individual indicator reliability (Hair et al., 2017). Internal consistency reliability was confirmed because all the constructs' Cronbach alphas and composite reliability (CR) values surpassed the cut-off of 0.7 (See Table 2) (Hair & al. 2017).

Convergent validity was also confirmed for three key reasons. :

- 1st, as noted before all items loaded positively and significantly on their respective constructs.
- 2nd, all constructs had composite reliability (CR) values higher than 0.70.
- 3rd, as Table 2 shows, the average variance extracted (AVE) for all constructs exceeded the threshold of 0.50 (Bagozzi & Yi, 1988).

The discriminant validity was assessed using two approaches :

- 1st, the Fornell and Larcker criterion was used. This criterion requires that a construct's square root of AVE (shown on the diagonal with bold values in Table 2) is larger than its biggest correlation with any construct (Fornell & Lacker, 1981). Table 2 shows that this criterion is satisfied for all constructs.
- 2nd, the heterotrait-monotrait ratio (HTMT) criterion was use (Hair et al., 2017; Henseler et al., 2015).

	Cronbach's alpha	Composite reliability (rho_c)	Average variance extracted (AVE)	1	2	3	4	5	6
Com_eng	0,898	0,931	0,772	0,879	0,748	0,359	0,410	0,312	0,253
Desti_image	0,861	0,915	0,782	0,224	0,884	0,373	0,675	0,541	0,589
Green_att	0,905	0,929	0,724	0,544	0,267	0,851	0,740	0,260	0,508
Place_att	0,909	0,927	0,644	0,473	0,481	0,378	0,802	0,291	0,622
Sust_purch_int	0,932	0,952	0,834	0,576	0,232	0,626	0,334	0,913	0,602
WOM	0,944	0,960	0,857	0,555	0,262	0,691	0,347	0,707	0,926

Table 2: Composite reliability, average variance extracted, correlations, and discriminant validity checks.
(Above the diagonal elements are the HTMT ratios)

	VIF
Com_eng → Sust_purch_int	1,445
Com_eng → WOM	1,000
Desti_image → Com_eng	1,316
Green_att → Com_eng	1,179
Place_att → Com_eng	1,425
WOM → Sust_purch_int	1,445

Table 3: VIF values

	R-square
Com_eng	0,382
Sust_purch_int	0,549
WOM	0,308

Table 4: R-square

As Table 2 shows, all HTMT ratios are below the more conservative threshold value of 0.85 (Hair et al., 2017; Henseler et al., 2015).

They provide additional evidence of discriminant validity.

The structural model was assessed using the sign, magnitude, and significance of the structural path coefficients; the magnitude of R^2 value for each endogenous variable as a measure of the model's predictive accuracy; and the Stone-Geisser's Q^2 values as a measure of the model's predictive relevance (Hair et al., 2017). However, collinearity was checked before evaluating the structural model (Hair et al., 2017).

The VIF values ranged from 1.00 to 1.445, which was below the indicative critical value of 5 (Hair et al., 2017). These values indicated no collinearity.

The coefficient of the determination R^2 for the three endogenous variables of community engagement, sustainable purchase intentions, and Word of mouth were 38,2%, 54,9%, 30,8%, and respectively. These values surpassed the threshold value of 10% (Falk & Miller, 1992).

The Q^2 values for all endogenous variables (0.32 for community engagement 0,27 sustainable purchase intention and 0,29 for word of mouth respectively) were above zero that indicated the predictive relevance of the model. Bootstrapping with 5,000 subsamples were used to evaluate the significance of the parameter estimates (Hair et al., 2017).

3.2 Quantitative results

The results in Table 3 show that :

- Community engagement has a significantly positive effect on Word of mouth ($\beta = 0,555$ $p < 0.001$).
- Green attachment has a significant positive effect on Community engagement ($\beta = 0.431$, $p < 0.001$).
- Word of mouth has a significantly positive effect on Sustainable purchase intention. ($\beta = 0.559$, $p < 0.001$).

Community engagement has a significantly positive relation with word of mouth and sustainable purchase intention ($\beta = 0.310$, $p < 0.001$)

These results provide support for H1, H2 and H3 respectively.

H1: Community engagement has a positive effect on WOM (supported).

H2: Green attachment has a positive effect on community engagement (supported).

H3: WOM has a positive effect on sustainable purchase intention (supported).

	Original sample (O)	Standard deviation (STDEV)	Tstatistics (O/STDEV)-	P values	
Com_eng → Sust_purch_int	0,266	0,106	2,501	0,012	B=0,266 ; P<0,05
Com_eng → WOM	0,555	0,090	6,145	0,000	B=0,555 ; P<0,001
Desti_image → Com_eng	-0,053	0,109	0,488	0,625	B=-0,053; NS
Green_att → Com_eng	0,431	0,112	3,863	0,000	B=0,431 ; P<0,001
Place_att → Com_eng	0,336	0,098	3,431	0,001	B=0,336 ; P<0,01
WOM → Sust_purch_int	0,559	0,100	5,600	0,000	B=0,559 ; P<0,001

Table 5: coefficients: Mean, STEDEV, T-values, P-values

	Original sample (O)	Standard deviation (STDEV)	Tstatistics (O/STDEV)	P values	
Desti_image → Com_eng → WOM → Sust_purch_int	-0,016	0,033	0,495	0,620	NS
Green_att → Com_eng → WOM → Sust_purch_int	0,134	0,053	2,518	0,012	B=0,134 P<0,05
Place_att → Com_eng → WOM → Sust_purch_int	0,104	0,042	2,486	0,013	B=0,104 P<0,05
Desti_image → Com_eng → Sust_purch_int	-0,014	0,032	0,441	0,659	NS
Desti_image → Com_eng → WOM	-0,029	0,059	0,499	0,618	NS
Green_att → Com_eng → Sust_purch_int	0,115	0,058	1,975	0,048	B=0,115 P<0,05
Green_att → Com_eng → WOM	0,239	0,085	2,804	0,005	B=0,239 P<0,01
Place_att → Com_eng → Sust_purch_int	0,089	0,044	2,052	0,040	B=0,089 P<0,01
Place_att → Com_eng → WOM	0,187	0,062	3,021	0,003	B=0,187 P<0,03
Com_eng → WOM → Sust_purch_int	0,310	0,077	4,030	0,000	B=0,310 P<0,001

7: Path coefficients: Mean, STEDEV, T-values, P-values

The figure below illustrates the relationships between green attitudes (Green_att), place attachment (Place_att), community engagement (Com_eng), word-of-mouth (WOM), and sustainable purchase intentions (Sust_purch_int), based on the structural equation model tested in this study.

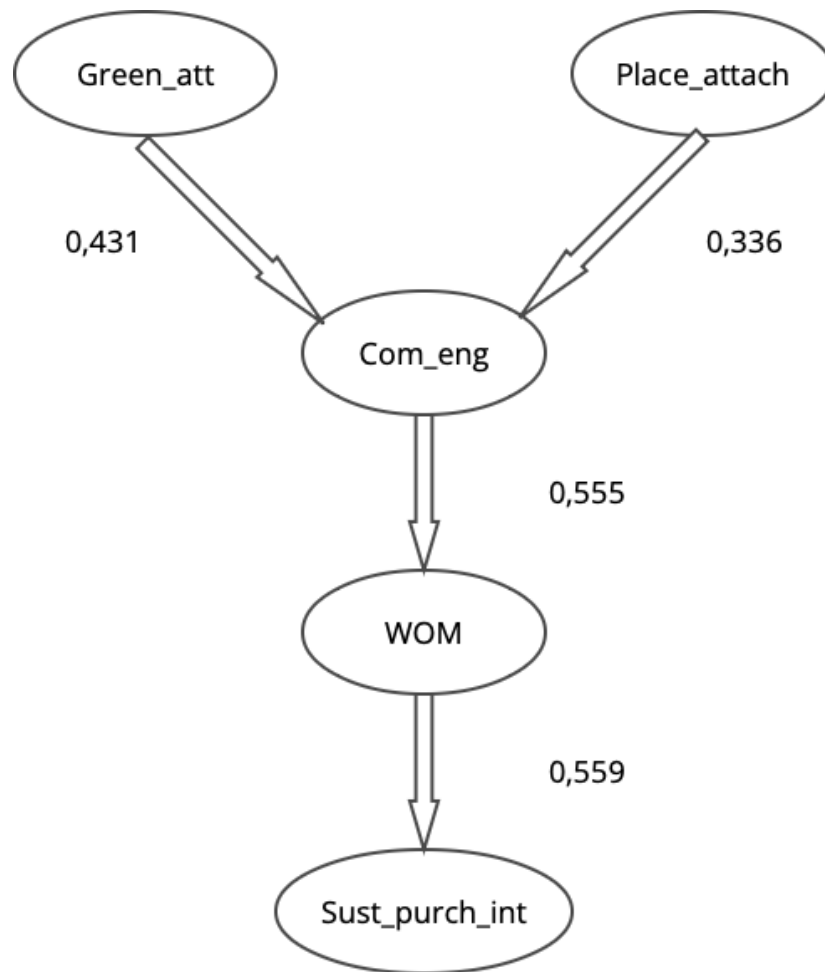


Figure 8: Conceptual Model

CHAPTER 4

Discussions

The study examines the connections, among community involvement, environmental commitment, word of mouth communication and intentions to make eco purchases within the surfing community. By investigating these aspects the research introduces the idea of "lifestyle centrality" as a perspective, for comprehending these interactions. The results offer perspectives on how personal lifestyle decisions, closely intertwined with pursuits and surroundings can impact sustainable shopping habits. Before we dive into these discoveries it's crucial to recognize the constraints of surveys in offering glimpses into how people behave and their perspectives, on the environment (Wheaton 2020). Borne (2018) points out, respondents often feel compelled to provide favorable answers to environmental questions.

4.1 Community Engagement, Centrality to Lifestyle, and WOM

The results provide evidence that involving the community greatly enhances WOM communication, among surfers. A notion supported by studies emphasizing the role of social interactions in influencing consumer behavior (Anderson 1998 and Chaniotakis & Lymperopoulos 2009). What sets this research apart is its approach, to Engaging with the community is essential, for surfers as it is intertwined with their “centrality to lifestyle. How they live each day.

The idea of centrality to lifestyle suggests that specific activities like surfing play such a role in a persons identity that they become a cornerstone of their existence. A study made by Brown et al (2007) found that surfers who immerse themselves in ocean life and surf culture are inclined to participate in community events that align with and strengthen this part of their lives. This involvement naturally spills over into word of mouth interactions as surfers enthusiastically discuss their adventures and viewpoints, with others in their community. In knit groups such, as the surfing community trust and reputation play a role. Being integral to ones way of life not strengthens community ties. Also foster the impact of word of mouth recommendations as a significant force, in guiding consumer choices and advocating for sustainability efforts.

The strong connection, between being involved in the community and word of mouth recommendations implies that surfers who see engagement as a part of their lifestyle tend to share their experiences more often; this helps to expand the influence and significance of their suggestions to others. This discovery highlights the importance of community led efforts, in encouraging consumer habits because individuals deeply rooted in their communities are also inclined-to-support-eco-products-and-behaviors.

4.2 Green Attachment, Centrality to Lifestyle, and Community Engagement

The research further supports the idea that having a connection, to nature can positively influence involvement in community initiatives positively. This discovery aligns with studies emphasizing how a deep emotional tie to the environment motivates people to engage in efforts for environmental preservation (Newton et al., 2015; Zhang et al., 2015). This study goes beyond these findings by introducing the idea of centrality to one's way of life and proposing that green attachment is more, than a feeling but a vital part of many surfers' lifestyles.

Surfers view the ocean as more, than a setting, for their activities it's a part of their way of life that shapes their identity and everyday routines. This strong connection leads them to participate in initiatives aimed at safeguarding and conserving the ocean. (Williams & Vaske, 2003). The findings align with existing research, on the connection to a place and the responsibility for its protection. When individuals feel deeply connected to a location like surfers do with the ocean as a part of their lives they are inclined, towards supporting causes and community conservation efforts.

Furthermore, the study shows how linking practices, with the core of surfer culture can inspire both individual and group efforts towards conservation and sustainability. This indicates that marketing and policy approaches that resonate with these values could yield impact. By embracing the shared ethos of surfers organizations can boost community involvement and strengthen backing, for eco friendly initiatives.

4.3 WOM, Centrality to Lifestyle, and Sustainable Purchase Intentions

The hypothesis that WOM positively influences sustainable purchase intentions is also strongly supported by our findings, consistent with the established understanding of WOM as a powerful driver of consumer behavior (Chen et al., 2014). What sets this study apart is its take on how being central to one's lifestyle amplifies the effect of WOM, on driving eco-friendly purchase decisions.

For surfers, in the community sharing their recommendations goes beyond advice; it reflects their core beliefs and lifestyle preferences ingrained in surfing culture. The importance of surfing in their lives means that the products and brands they promote are a reflection of their identity and environmental values. When surfers participate in word of mouth communication, it is not about exchanging information but, about supporting products that align with their lifestyle choices. Within the surfing community, WOM holds a sway due, to its perceived authenticity and credibility, among enthusiasts.

The findings hold importance considering the issues caused by greenwashing. Assertions that can erode consumer trust (Guerreiro & Pacheco 2021). In regions where activities such, as surfing play a role in life and culture; WOM communication acts as a pivotal tool against greenwashing practices. Surfers tend to examine and talk about statements, within their community to guarantee that only products genuinely reflecting their environmental beliefs receive their support. This highlights the significance of building community connections and promoting conversations, about sustainability in areas where specific activities are integral, to the way of life.

4.4 Practical Implications of Centrality to Lifestyle

The idea of centrality, in lifestyle holds real world implications for marketers and policymakers alike. To begin with this notion implies that promoting products to surfers should revolve around foster community involvement by aligning with their values and way of life. Marketing approaches that highlight genuineness, integrity and a commitment to causes are more likely to strike a chord with this group of people resulting in chances of misleading advertising practices and nurturing lasting connections, with brands. (Van den Heuvel, 2020)

In addition, to that point mentioned earlier on about promoting community involvement in advocating for sustainability and educating each other directly on the topic can significantly enhance the effects of word of mouth marketing in areas where such actions are a fundamental part of daily life routine for the residents there. This strategy not only aids in achieving targets but also reinforces the bonds within the community by fostering a beneficial cycle where heightened participation results in better care, for the environment.

Additionally, knowing that the idea of how important surfing is, to people's way of life can lead to creating communication plans that are more specific and successful. For instance, when acknowledging that surfing holds a meaning beyond being a physical activity but is a representation of a lifestyle for numerous individuals, advertisers can design messages that resonate with the wider values and beliefs associated with the surfing culture. They can emphasize how sustainable products contribute to improving surfers' overall well-being and satisfaction, in life.

4.5 Limitations and Future Research

While this study provides valuable insights into the relationship between community engagement, green attachment, WOM, and sustainable purchase intentions, it is not without limitations. The sample size, while sufficient for analysis, could be expanded in future studies to include a more diverse range of participants from different geographic regions. Additionally, the cross-sectional design of the study limits the ability to draw causal inferences. Future research could employ longitudinal designs to better understand the temporal dynamics of these relationships, particularly how centrality to lifestyle may evolve over time.

Moreover, while the study focused on surfers as a unique subculture, future research could explore how these findings generalize to other outdoor or nature-based communities. Understanding the nuances across different groups could provide more tailored strategies for promoting sustainability across a wider audience. Additionally, future research could explore how the concept of centrality to lifestyle interacts with other factors, such as socio-economic status or cultural background, to influence sustainable behaviors. In conclusion, promoting sustainable behaviors within the surfing community and beyond is not just an opportunity, but an urgent necessity if we are to protect the environment and ensure the well-being of future generations, as collective action is key to saving the planet.

Conclusion

In conclusion the study emphasizes the link, between surf culture, sustainability and the surf tourism sector. The strong emotional bond that surfers have with the ocean as discussed through ideas such as place attachment, identity and loyalty significantly impacts their actions. This bond not encourages a sense of duty, toward environmental protection but also affects surfers' spending choices and travel habits.

The results show that advocating for sustainability, in the surfing community is more, than a passing fad; its deeply woven into the fabric of the surfing way of life.. By recognizing the significance of surfing in peoples sense of self and belonging, advertisers and decision makers can use this knowledge to create plans that support habits.. Additionally by nurturing community involvement and encouraging consciousness they can spark word of mouth referrals, which will help spread eco friendly practices throughout the larger surfing community..

The research also recognizes the conflicting aspects, in surf culture regarding the effects of surf tourism and the production of travel gear and equipment which is a point of concern that needs addressing further. This contradiction emphasizes the importance of maintaining a balance, between surfers environmental values and their way of life by promoting surfing gear innovations and practicing tourism management.

In the end this study provides information, on blending sustainability principles into surf tourism, which can benefit local ecosystems and communities. It also highlights the role of surfers, as guardians of the environment serving as a model for sectors to align leisure activities with progress.

Sources

- Aguiar-Quintana, T., Román, C., & Gubisch, P. M. M. (2022). The post-covid-19 tourism recovery led by crisis-resistant tourists: Surf tourism preferences in the Canary Islands. *Tourism Management Perspectives*, 44, 101041. <https://doi.org/10.1016/j.tmp.2022.101041>
- Akbar, W., Hassan, S., Khurshid, S., Niaz, M., & Rizwan, M. (2014). Antecedents affecting customer's purchase intentions towards Green Products. *Journal of Sociological Research*, 5(1). <https://doi.org/10.5296/jsr.v5i1.6566>
- Altman, I., & Low, S. M. (Eds.). (2012). *Place attachment* (Vol. 12). Springer Science & Business Media
- Anderson Jon, 2014b, « Surfing between the local and the global; identifying spatial divisions in surfing practices », *Transactions of the Institute of British Geographers*, Vol. 39, n° 2, pp. 237-249.
- Anderson, E. W. (1998). Customer satisfaction and word of mouth. *Journal of Service Research*, 1(1), 5–17. <https://doi.org/10.1177/109467059800100102>
- Anton, C. E., & Lawrence, C. (2014). Home is where the heart is: The effect of place of residence on place attachment and community participation. *Journal of Environmental Psychology*, 40, 451–461. <https://doi.org/10.1016/j.jenvp.2014.10.007>
- Anton, C. E., & Lawrence, C. (2016). The relationship between place attachment, the theory of planned behaviour and residents' response to place change. *Journal of Environmental Psychology*, 47, 145–154. <https://doi.org/10.1016/j.jenvp.2016.05.010>
- Arlinghaus, R., Aas, Ø., Al'os, J., Arismendi, I., Bower, S., & Yang, Z.-J. (2020). Global participation in and public attitudes toward recreational fishing: International perspectives and developments. *Reviews in Fisheries Science & Aquaculture*, 1–38. <https://doi.org/10.1080/23308249.2020.1782340>
- Barbieri, C., & Sotomayor, S. (2013a). Surf Travel Behavior and Destination Preferences: An application of the Serious Leisure Inventory and measure. *Tourism Management*, 35, 111–121. <https://doi.org/10.1016/j.tourman.2012.06.005>
- Bernardo, F., & Palma-Oliveira, J. (2013). Place identity, place attachment and the scale of place: The impact of place salience. *Psychology*, 4(2), 167–193. <https://doi.org/10.1080/21711976.2013.10773867>
- Bettman, J. R. (1973). Perceived risk and its components: A model and empirical test. *Journal of Marketing Research*, 10(2), 184–190. <https://doi.org/10.1177/002224377301000209>
- Biermann, F., Kanie, N., & Kim, R. E. (2017a). Global governance by goal-setting: The novel approach of the UN Sustainable Development Goals. *Current Opinion in Environmental Sustainability*, 26–27, 26–31. <https://doi.org/10.1016/j.cosust.2017.01.010>

- Borne, G. (2017). Sustainability and surfing: Themes and synergies. In G. Borne & J. Ponting (Eds.),
- Borne, G. (2018). Sustainable surfing (pp. 241–250). Surfing and sustainability. London: Routledge.
- Bramwell, B. (2011). Governance, the State and Sustainable Tourism: A political economy approach. *Journal of Sustainable Tourism*, 19(4–5), 459–477. <https://doi.org/10.1080/09669582.2011.576765>
- Britton, E., & Foley, R. (2020). Sensing water: Uncovering health and well-being in the sea and surf. *Journal of Sport and Social Issues*, 45(1), 60–87. <https://doi.org/10.1177/0193723520928597>
- Brochado, A., Stoleriu, O., & Lupu, C. (2018). Surf camp experiences. *Journal of Sport and Tourism*, 22(1), 21–41.
- Brown, M., & Humberstone, B. (2016). *Seascapes: Shaped by the Sea*. <https://doi.org/10.4324/9781315607931>
- Brundtland, G. H. (1987). Our common future—call for action. *Environmental Conservation*, 14(4), 291–294. <https://doi.org/10.1017/s0376892900016805>
- Buckley, R. (2002a). Surf tourism and sustainable development in Indo-Pacific islands: I. The industry and the islands. *Journal of Sustainable Tourism*, 10(5), 405–424.
- Buckley, R. (2002b). Surf tourism and sustainable development in Indo-Pacific islands: II. Recreational capacity management and case study. *Journal of Sustainable Tourism*, 10(5), 425–442.
- Buckley, R. (2012). Sustainable tourism: Research and reality. *Annals of Tourism Research*, 39(2), 528–546. <https://doi.org/10.1016/j.annals.2012.02.003>
- Buckley, R. C., Brough, P., Hague, L., Chauvenet, A., Fleming, C., Roche, E., Sofija, E., & Harris, N. (2019). Economic value of protected areas via visitor mental health. *Nature Communications*, 10(1), 5005. <https://doi.org/10.1038/s41467-019-12631-6>
- Butt, T. (2015). Surf travel: The elephant in the room. In G. Borne & J. Ponting (Eds.), *Sustainable stoke: Transitions to sustainability in the surfing world* (pp. 200–213). Plymouth: University of Plymouth Press.
- Callède, J.-P., Sabatier, F., & Bouneau, C. (2014a). Sport, nature et développement durable: Une question de génération?: Actes du Colloque, Bordeaux, Maison des Sciences de l'homme d'aquitaine et faculté des sciences du sport et de l'éducation physique, 9-10 juin 2011. Maison des sciences de l'homme d'Aquitaine.
- Chang, S., & Gibson, H. J. (2015). The relationships between four concepts (involvement, commitment, loyalty, and habit) and consistency in behavior across leisure and tourism. *Tourism Management Perspectives*, 13, 41–50. <https://doi.org/10.1016/j.tmp.2014.11.003>

- Chen, N. (Chris), Dwyer, L., & Firth, T. (2014). Conceptualization and measurement of dimensionality of place attachment. *Tourism Analysis*, 19(3), 323–338. <https://doi.org/10.3727/108354214x14029467968529>
- Chen, A., & Peng, N. (2012). Green Hotel Knowledge and tourists' staying behavior. *Annals of Tourism Research*, 39(4), 2211–2216. <https://doi.org/10.1016/j.annals.2012.07.003>
- Chaniotakis, I. E., & Lymperopoulos, C. (2009). Service quality effect on satisfaction and word of mouth in the Health Care Industry. *Managing Service Quality: An International Journal*, 19(2), 229–242. <https://doi.org/10.1108/09604520910943206>
- Collins, D., & Kearns, R. (2008). Uninterrupted views: Real-estate advertising and changing perspectives on coastal property in New Zealand. *Environment and Planning A: Economy and Space*, 40(12), 2914–2932. <https://doi.org/10.1068/a4085>
- Crompton, J. (1979). An assessment of the image of Mexico as a vacation destination and the influence of geographical location upon that image. *Journal of Travel Research*, 17(4), 18–23. <https://doi.org/10.1177/004728757901700404>
- Dahlmann, F., Stubbs, W., Griggs, D., & Morrell, K. (2019). Corporate actors, the UN Sustainable Development Goals and earth system governance: A research agenda. *The Anthropocene Review*, 6(1–2), 167–176. <https://doi.org/10.1177/2053019619848217>
- Da Rosa, S., Anjos, F. A., Pereira, M. de, & Arnhold Junior, M. (2019). Image perception of surf tourism destination in Brazil. *International Journal of Tourism Cities*, 6(4), 1111–1127. <https://doi.org/10.1108/ijtc-11-2018-0090>
- Delanty, G. (2013). Community. <https://doi.org/10.4324/9781315011417>
- de Matos, C. A., & Rossi, C. A. (2008). Word-of-mouth communications in marketing: A meta-analytic review of the antecedents and moderators. *Journal of the Academy of Marketing Science*, 36(4), 578–596. <https://doi.org/10.1007/s11747-008-0121-1>
- Dolnicar, S., & Fluker, M. (2003). Behavioural market segments among surf tourists: Investigating past destination choice. *Journal of Sport & Tourism*, 8(3), 186–196.
- Echtner, C., & Ritchie, J. (1993). The measurement of destination image: An empirical assessment. *Journal of Travel Research*, 31(4), 3–13. <https://doi.org/10.1177/004728759303100402>
- Elrick-Barr, C. E., & Smith, T. F. (2021). Policy is rarely intentional or substantial for coastal issues in Australia. *Ocean Coast. Manag.*, 207, 105609. <https://doi.org/10.1016/j.ocecoaman.2021.105609>
- Evers, C., & Phoenix, C. (2022). Relationships between recreation and pollution when striving for wellbeing in Blue Spaces. *International Journal of Environmental Research and Public Health*, 19(7), 4170. <https://doi.org/10.3390/ijerph19074170>

- Fadda, N. (2020). Entrepreneurial behaviours and managerial approach of lifestyle entrepreneurs in surf tourism: An exploratory study. *Journal of Sport & Tourism*, 24(1), 53–77.
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39. <https://doi.org/10.2307/3151312>
- Ford, N. J., & Brown, D. (2005). *Surfing and social theory: Experience, embodiment and narrative of the dream glide*. Routledge.
- Fox, N., Marshall, J., & Dankel, D. J. (2021). Ocean literacy and surfing: Understanding how interactions in coastal ecosystems inform Blue Space user's awareness of the Ocean. *International Journal of Environmental Research and Public Health*, 18(11), 5819. <https://doi.org/10.3390/ijerph18115819>
- Gallarza, M. G., Saura, I. G., & García, H. C. (2002). Destination image. *Annals of Tourism Research*, 29(1), 56–78. [https://doi.org/10.1016/s0160-7383\(01\)00031-7](https://doi.org/10.1016/s0160-7383(01)00031-7)
- Gesler, W., & Kearns, R. (2002). *Culture/Place/Health*. Routledge
- Gibson, C., & Warren, A. (2017). Surfboard making and environmental sustainability: New materials and regulations, subcultural norms and economic constraints. In *Sustainable surfing* (pp. 87-103). Routledge.
- Gilio-Whitaker, D. (2017). Appropriating surfing and the politics of Indigenous Authenticity. *The Critical Surf Studies Reader*, 214–232. <https://doi.org/10.2307/j.ctv111jh9f.15>
- Goodman, R., & Douglas, K. (2010). Life in a master planned estate—community and lifestyle or conflict and liability? *Urban Policy and Research*, 28(4), 451–469. <https://doi.org/10.1080/08111146.2010.528743>
- Gössling, S., Peeters, P., Hall, C. M., Ceron, J.-P., Dubois, G., Lehmann, L. V., & Scott, D. (2012). Tourism and water use: Supply, demand, and security. *An International Review. Tourism Management*, 33(1), 1–15. <https://doi.org/10.1016/j.tourman.2011.03.015>
- Gruen, T. W., Osmonbekov, T., & Czaplewski, A. J. (2006). EWOM: The impact of customer-to-customer online know-how exchange on customer value and loyalty. *Journal of Business Research*, 59(4), 449–456. <https://doi.org/10.1016/j.jbusres.2005.10.004>
- Guerreiro, J., & Pacheco, M. (2021). How green trust, consumer brand engagement and green word-of-mouth mediate purchasing intentions. *Sustainability*, 13(14), 7877. <https://doi.org/10.3390/su13147877>
- Guibert, C. (2007). Le premier âge du surf en France : un sport socialement sélectif. *Movement & Sport Sciences*, 61, 89-100. <https://doi.org/10.3917/sm.061.0089>

Guibert, C. (2011). Surf et « contre-culture » : la dimension symbolique des constructions journalistiques de la presse spécialisée en France. *Sciences sociales et sport*, 4, 11-39. <https://doi.org/10.3917/rsss.004.0011>

Hillairet, D. (1994, January 1). Surf et pratique de glisse : Invention, évolution et tendances technologiques. *Surf Atlantique - Surf et pratique de glisse : invention, évolution et tendances technologiques*. <https://books.openedition.org/msha/16107>

Hutton, G., & Chase, C. (2016). The knowledge base for achieving the Sustainable Development Goal targets on water supply, sanitation and hygiene. *International Journal of Environmental Research and Public Health*, 13(6), 536. <https://doi.org/10.3390/ijerph13060536>

Jalilvand, M., & Samiei, N. (2012). The effect of electronic word of mouth on brand image and purchase intention. *Marketing Intelligence & Planning*, 30(4), 460–476. <https://doi.org/10.1108/02634501211231946>

Joshi, Y., & Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. *International Strategic Management Review*, 3(1–2), 128–143. <https://doi.org/10.1016/j.ism.2015.04.001>

Kalafatis, S. P., Pollard, M., East, R., & Tsogas, M. H. (1999). Green marketing and Ajzen's theory of planned behaviour: A cross-market examination. *Journal of Consumer Marketing*, 16(5), 441–460. <https://doi.org/10.1108/07363769910289550>

Kampion, D., and Brown, B (2003). *A History of Surf Culture*. Köln: Taschen.

Kyle, G., Absher, J., Norman, W., Hammitt, W., & Jodice, L. (2007). A modified involvement scale. *Leisure Studies*, 26(4), 399–427. <https://doi.org/10.1080/02614360600896668>

Kyle, G., Graefe, A., Manning, R., & Bacon, J. (2003). An examination of the relationship between leisure activity involvement and place attachment among hikers along the Appalachian Trail. *Journal of Leisure Research*, 35(3), 249–273. <https://doi.org/10.1080/00222216.2003.11949993>

Kyle, G. T., Mowen, A. J., & Tarrant, M. (2004). Linking place preferences with place meaning: An examination of the relationship between place motivation and place attachment. *Journal of Environmental Psychology*, 24(4), 439–454. <https://doi.org/10.1016/j.jenvp.2004.11.001>

Laderman, S. (2014). A political history of surfing. *Empire in Waves*, 1–7. <https://doi.org/10.1525/california/9780520279100.003.0001>

Langseth, T., & Vyff, A. (2021). Cultural dissonance: Surfers' environmental attitudes and actions. *Frontiers in Sports and Active Living*, 3. <https://doi.org/10.3389/fspor.2021.695048>

- Laviolette, P. (2019). The materiality of waves and the liminality of things. *Liminalities: A Journal of Performance Studies*, 15(1), 1–21. Retrieved from <http://liminalities.net/15-1/waves.pdf>
- Lazarow, N., & Olive, R. (2017). Culture, meaning and sustainability in surfing. *Sustainable Surfing*, 202–218. <https://doi.org/10.4324/9781315680231-13>
- Lazarow, N., Miller, M. L., & Blackwell, B. (2008). The value of recreational surfing to society. *Tourism in Marine Environments*, 5(2), 145–158. <https://doi.org/10.3727/154427308787716749>
- Lee, J.-H., & Scott, D. (2004). Measuring birding specialization: A confirmatory factor Analysis. *Leisure Sciences*, 26(3), 245–260. <https://doi.org/10.1080/01490400490461387>
- Lee, E. J., Bae, J., & Kim, K. H. (2020). The effect of environmental cues on the purchase intention of sustainable products. *Journal of Business Research*, 120, 425–433. <https://doi.org/10.1016/j.jbusres.2019.10.048>
- Lefebvre, S., & Roult, R. (2009). Les nouveaux territoires du surf dans la Ville érudit. <https://www.erudit.org/fr/revues/teoros/2009-v28-n2-teoros01375/1024807ar.pdf>
- Lengen, C., & Kistemann, T. (2012). Sense of place and place identity: Review of Neuroscientific Evidence. *Health & Place*, 18(5), 1162–1171. <https://doi.org/10.1016/j.healthplace.2012.01.012>
- Lemarié, J. (2016). Debating on Cultural Performances of Hawaiian Surfing in the 19th Century. *Journal de la Société des Océanistes*, 142-143, 159a-174a. <https://doi.org/10.4000/jso.7625>
- Lewicka, M. (2011). Place attachment: How far have we come in the last 40 years? *Journal of Environmental Psychology*, 31(3), 207–230. <https://doi.org/10.1016/j.jenvp.2010.10.001>
- Lin, C.-C., & Lockwood, M. (2014a). Forms and sources of place attachment: Evidence from two protected areas. *Geoforum*, 53, 7481. <https://doi.org/10.1016/j.geoforum.2014.02.008>
- Liburd, J. J., & Becken, S. (2017). Values in nature conservation, tourism and UNESCO World Heritage Site Stewardship. *Journal of Sustainable Tourism*, 25(12), 1719–1735. <https://doi.org/10.1080/09669582.2017.1293067>
- Mach, L., Ponting, J., Brown, J., & Savage, J. (2023). Riding waves of intra-seasonal demand in surf tourism: Analysing the nexus of seasonality and 21st century surf forecasting technology. In *Nature Sports* (pp. 182-200). Routledge.
- Mallette, A., Smith, T. F., Elrick-Barr, C., Blythe, J., & Plummer, R. (2021). Understanding preferences for coastal climate change adaptation: a systematic literature review. *Sustainability*. <https://doi.org/10.3390/su13158594>

- Manero, A., Yusoff, A., Lane, M., & Verreydt, K. (2024). A national assessment of the Economic and wellbeing impacts of recreational surfing in Australia. *Marine Policy*, 167, 106267. <https://doi.org/10.1016/j.marpol.2024.106267>
- Moutinho, L., Dionísio, P., & Leal, C. (2007). Surf tribal behaviour: A sports marketing application. *Marketing Intelligence & Planning*, 25(7), 668–690.
- Oliver, J. D., & Lee, S. (2010). Hybrid car purchase intentions: A cross-cultural analysis. *Journal of Consumer Marketing*, 27(2), 96–103. <https://doi.org/10.1108/07363761011027204>
- Orams, M. B., & Towner, N. (2012). Riding the wave: History, definitions, and a proposed typology of surf-riding tourism. *Tourism in Marine Environments*, 8(4), 173–188. <https://doi.org/10.3727/154427313x13631129554901>
- Oppermann, M. (2000). Tourism Destination Loyalty. *Journal of Travel Research*, 39(1), 78–84. <https://doi.org/10.1177/004728750003900110>
- Patterson, J., Schulz, K., Vervoort, J., van der Hel, S., Widerberg, O., Adler, C., Hurlbert, M., Anderton, K., Sethi, M., & Barau, A. (2017). Exploring the governance and politics of transformations towards Sustainability. *Environmental Innovation and Societal Transitions*, 24, 1–16. <https://doi.org/10.1016/j.eist.2016.09.001>
- Paul, J., Modi, A., & Patel, J. (2016b). Predicting green product consumption using theory of planned behavior and reasoned action. *Journal of Retailing and Consumer Services*, 29, 123–134. <https://doi.org/10.1016/j.jretconser.2015.11.006>
- Peters, M., Frehse, J., & Buhalis, D. (2009). The importance of lifestyle entrepreneurship: A conceptual study of the tourism industry. *PASOS Revista de Turismo y Patrimonio Cultural*, 7(3), 393–405. <https://doi.org/10.25145/j.pasos.2009.07.028>
- Pinto-Correia, T., Guiomar, N., Guerra, C. A., & Carvalho-Ribeiro, S. (2016). Assessing the ability of rural areas to fulfil multiple societal demands. *Land Use Policy*, 53, 86–96. <https://doi.org/10.1016/j.landusepol.2015.01.031>
- Ponting, J., & McDonald, M. G. (2013). Performance, agency and change in surfing tourist space. *Annals of Tourism Research*, 43, 415–434.
- Ponting Jess, O'Brien Danny, 2013, « Liberalizing Nirvana: an analysis of the consequences of common pool resource deregulation for the sustainability of Fiji's surfing tourism industry », *Journal of Sustainable Tourism*, Vol. 22, n° 3, pp. 384-402.
- Prendergast, G., Ko, D., & Siu Yin, V. Y. (2010). Online word of mouth and consumer purchase intentions. *International Journal of Advertising*, 29(5), 687–708. <https://doi.org/10.2501/s0265048710201427f>
- Ratchford, B. T., & Srinivasan, N. (1993). An empirical investigation of returns to search. *Marketing Science*, 12(1), 73–87. <https://doi.org/10.1287/mksc.12.1.73>

Raymond, C. M., Brown, G., & Weber, D. (2010). The measurement of place attachment: Personal, community, and environmental connections. *Journal of Environmental Psychology*, 30(4), 422–434 <https://doi.org/10.1016/j.jenvp.2010.08.002>

Reineman, D. R., Thomas, L. N., & Caldwell, M. R. (2017). Using local knowledge to project sea level rise impacts on wave resources in California. *Ocean & Coastal Management*, 138, 181–191. <https://doi.org/10.1016/j.ocecoaman.2017.01.020>

Relph, E. (1976). *Place and placelessness* (Vol. 67, p. 45). London: Pion.

Reis, P. (2015). Peniche: a new use for an old territory. In *I Encontro Científico Proceedings*.

Reis, P. M., & Carneiro, M. J. (2022). Surf destination attributes. *Encyclopedia of Tourism Management and Marketing*, 295–299. <https://doi.org/10.4337/9781800377486.surf.destination.attributes>

Ruttenberg, T., & Brosius, P. (2017). Decolonizing Sustainable Surf Tourism. *The Critical Surf Studies Reader*. <https://doi.org/10.1215/9780822372820-006>

Saarienen, J. (2013). Critical sustainability: Setting the limits to growth and responsibility in tourism. *Sustainability*, 6(1), 1–17. <https://doi.org/10.3390/su6010001>

Sæþórsdóttir, A. D., & Hall, C. M. (2019). Contested development paths and rural communities: Sustainable Energy or sustainable tourism in Iceland? *Sustainability*, 11(13), 3642. <https://doi.org/10.3390/su11133642>

Save the Waves. (2020). 2019/2020 Impact Report. https://www.savethewaves.org/wp-content/uploads/2021/08/SaveTheWaves_ImpactReport_2019_2020_WebShare.pdf

Scott, D., & Shafer, C. S. (2001). Recreational Specialization: A Critical Look at the Construct. *Journal of Leisure Research*, 33(3), 319–343. <https://doi.org/10.1080/00222216.2001.11949944>

Schlosser, A. E., White, T. B., & Lloyd, S. M. (2006). Converting web site visitors into buyers: How web site investment increases consumer trusting beliefs and online purchase intentions. *Journal of Marketing*, 70(2), 133–148. <https://doi.org/10.1509/jmkg.70.2.133>

Sichtmann, C. (2007). An analysis of antecedents and consequences of trust in a corporate brand. *European Journal of Marketing*, 41(9/10), 999–1015. <https://doi.org/10.1108/03090560710773318>

Snapes, L. (2019). The sustainable surfer: Meet the team behind the world's first fully recyclable wetsuit. *The Guardian*, August 8. Retrieved from https://www.theguardian.com/world/2019/aug/08/the-sustainable-surfer-meet-the-man-behind-the-worlds-first-fully-recyclable-wetsuit?utm_campaign=5later-linkinbio-finisterreuk&utm_content=5later-2960535&utm_medium=social&utm_source=instagram

Stedman, R. C. (2002). Toward a social psychology of Place. *Environment and Behavior*, 34(5), 561–581. <https://doi.org/10.1177/0013916502034005001>

Straub, D., & Gefen, D. (2004). Validation guidelines for is positivist research. *Communications of the Association for Information Systems*, 13. <https://doi.org/10.17705/1cais.01324>

Straughan, R. D., & Roberts, J. A. (1999). Environmental segmentation alternatives: A look at Green Consumer Behavior in the New Millennium. *Journal of Consumer Marketing*, 16(6), 558–575. <https://doi.org/10.1108/07363769910297506>

Suendermann, S. (2015). Beyond the waves: Exploring the social value of surfing to the Surf Coast community. <http://www.actionsportsfordev.org/assets/Uploads/Item-44-Appendix-1-Social-Value-of-Surfing-1.pdf>

Tasci, A. D. A., & Gartner, W. C. (2007). Destination image and its functional relationships. *Journal of Travel Research*, 45(4), 413–425. <https://doi.org/10.1177/0047287507299569>

Taupin, B. (2019). The role of nonhuman entities in institutional work: the case of the ocean in a surfing-centered local economy. *M@n@gement*, 22, 584–618. <https://doi.org/10.3917/mana.224.0584>

Teixeira, A. G. (2017). The sustainability of surfing tourism destinations. Politecnico de Leira.

Touron-Gardic, G., Simon, E., & Habasque, F. (2020). Les Réserves de vagues, Outil de conservation de l'hydrodiversité et de l'environnement côtier. *Dynamiques Environnementales*, (46), 43–65. <https://doi.org/10.4000/dynenviron.2790>

Tuan, Y. F. (1977). Sense and place. Schoff, Gretchen Holstein, and Yi-Fu Tuan. Two Essays on a Sense of Place.

Twigger-Ross, C., Bonaiuto, M., & Breakwell, G. (2003). Identity theories and environmental psychology. na.

Ratten, V. (2018). Entrepreneurial intentions of surf tourists. *Tourism Review*, 73(2), 262–276. <https://doi.org/10.1108/tr-05-2017-0095>

Van den Heuvel, L., Blicharska, M., Blyth, S., & Rönnbäck, P. (2020). Catch reporting in recreational fishing: Swedish anglers' attitudes and preferences, and the effect of social factors. *Fisheries Research*, 223, Article 105444. <https://doi.org/10.1016/j.fishres.2019.105444>

Van den Heuvel, L., Blicharska, M., Stensland, S., & Rönnbäck, P. (2022). Been there, done that? effects of centrality-to-lifestyle and experience use history on angling tourists' loyalty to a Swedish salmon fishery. *Journal of Outdoor Recreation and Tourism*, 39, 100549. <https://doi.org/10.1016/j.jort.2022.100549>

Vaske, J. J., & Kobrin, K. C. (2001). Place attachment and environmentally responsible behavior. *The Journal of Environmental Education*, 32(4), 16–21. <https://doi.org/10.1080/00958960109598658>

Vernette, E. (2008). Comprendre et interpréter une expérience de consommation avec « l'Album On-Line » (AOL): une application au surf des mers. In 7th International Congress Marketing Trends, Venice, January (Vol. 2008).

W. E., Backlund, E. A., & Bixler, R. D. (2004). Experience use history, place bonding and resource substitution of trout anglers during recreation engagements. *Journal of Leisure Research*, 36(3), 356–378. <https://doi.org/10.1080/00222216.2004.11950028>

Weaver, D. (2011). Can sustainable tourism survive climate change? *Journal of Sustainable Tourism*, 19(1), 5–15. <https://doi.org/10.1080/09669582.2010.536242>

Wheaton, B. (2020). Surfing and environmental sustainability. *Research in the Sociology of Sport*, 157–178. <https://doi.org/10.1108/s1476-285420200000013010>

Williams, D. R., & Vaske, J. J. (2003). The measurement of place attachment: Validity and Generalizability of a psychometric approach. *Forest Science*, 49(6), 830–840. <https://doi.org/10.1093/forestscience/49.6.830>

Woodley, S., Locke, H., Laffoley, D., MacKinnon, K., Sandwith, T., & Smart, J. (2019). A review of evidence for area-based conservation targets for the post-2020 global biodiversity framework. *Parks*, 25(2), 31-46.

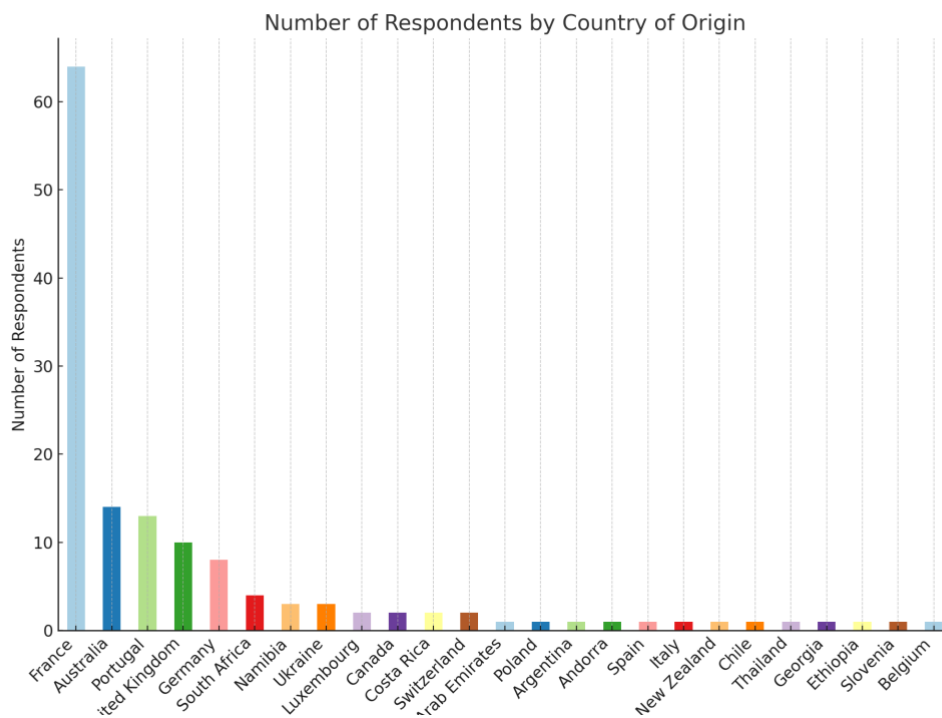
Young, P., Taylor, M., & Fallowfield, H. J. (2017). Mini-review: high rate algal ponds, flexible systems for sustainable wastewater treatment. *World Journal of Microbiology and Biotechnology*, 33, 117. <https://doi.org/10.1007/s11274-017-2282-x>

Zhang, L., Zhou, S., & Ishikawa, T. (2015). The relationship between place attachment, community participation and heritage conservation: A case study of the Zhangguying village in Hunan province, China. *Sustainability*, 7(6), 7086-7102. <https://doi.org/10.3390/su7067086>

Annex



Annex A : SDG's goals



Annex B: Respondents by countries

1.	Age	1.18-24 2.25-34 3.35-44 4.45-64 5.65+	
2.	Gender	1.Male 2.Female 3.Other	
3.	Level of education	1.Primary School 2.Secondary School Certificate of education advanced level (CGE) 3.Bachelor's degree 4.Master's degree 5.PHD	
4.	Country of origin	1.France 2.Germany 3.Slovenia 4.Spain 5.etc	
5.	Income in € (per year without taxes)	1.1000 – 5000 2.6000 – 10000 3.11000 – 30000 4.31000 – 50000 5.51000 – 100000 6.+101000	
6.	How often do you surf?	1.One time per year 2.One time per month 3.One time per week 4.Several times per week 5.Almost every day 6.Every day (when waves are there)	
7.	Where do you usually surf?	1. At my home surf spot 2. Random spots depending on the forecast (less than 50km from my house) 3. Random spots depending on the forecast (from 50 to 100km from my house) 4. Random spots depending on the forecast (from 100 to 200km from my house) 5. Random spots depending on the forecast (more than 200km from my house)	
8.	Sustainable purchase Intention (SPI)	1. I intend to purchase green product because of its environmental concern. 2. I expect to purchase green product in the future because of its environmental performance. 3. Overall, I am glad to purchase green product because it is environmentally friendly. 4. I am willing to pay for sustainable products even if it's cost more	Chang and Chen (2008)

9.	Green Attitude (GA)	<ol style="list-style-type: none"> 1. Green practice is good. 2. Green practice is useful. 3. Green practice is rewarding. 4. Green practice is sensible. 5. Green practice is responsible. 	Ajzen (2001)
10.	Word of mouth (WOM)	<ol style="list-style-type: none"> 1. I would make positive comments about surf sustainable products. 2. I have no negative opinion of surf sustainable products. 3. I would be proud to tell other people about surf sustainable products. 4. I would recommend surf sustainable product to my friends and family 	Nusair et al (2010)
11.	Community engagement (CE)	<ol style="list-style-type: none"> 1. I benefit from following the surf community's rules 2. I am motivated to participate in the surf community's activities because I feel better afterwards 3. I am motivated to participate in the surf community's activities because I am able to support other members 4. I am motivated to participate in the surf community's activities because I am able to reach personal goals 	Azapagic et al.'s (2005)
12.	Place attachment (PA)	<ol style="list-style-type: none"> 1. I miss the surf spot when I am not there 2. I know the surf spot very well 3. I defend the surf spot when somebody criticizes it 4. I feel secure in the surf spot 5. I am proud of the surf spot 6. The surf spot is a part of myself 7. I want to be involved in what is going on in the surf spot 	Lewicka, 2008
13.	Centrality to lifestyle (CL)	<ol style="list-style-type: none"> 1. If I stop Surfing, I will probably lose touch with a lot of my friends 2. Because of my passion for Surfing, I don't have time for other hobbies 3. Most of my friends are in some way connected with Surfing 4. Other leisure activities don't interest me as much as Surfing 5. I find that a lot of my life is organized around Surfing 6. Others would probably say that I spend too much time Surfing 	Van den Heuvel, L., Blicharska, M., Stensland, S., & Rönnbäck, P. (2022)
14.	Destination Image (DI)	<ol style="list-style-type: none"> 1. The surf spot is an historical and cultural place. 2. The surf spot has a beautiful and rich nature. 3. The surf spot has different lifestyles and traditions. 4. The surf spot has fresh and oxygen-rich air. 5. The surf spot has clean and organized beaches. 6. The city of surf spot has hospitable residents. 	Beerli & Martin (2004)

Annex C : Questionnaire for Survey