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The future development of surf tourism in coastal destinations in Western Europe

Analysis of the potential development of surf tourism in Western Europe and how it can set a benchmark for sustainable adventure tourism.

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Abstract

The report analyses surf tourism in Western Europe and its potential for sustainability. Surf tourism is an attractive sector of adventure tourism that generates increasing numbers of tourists. This development is caused by economic, physical, psychological, and social factors that are conjoined with surfing. These factors are analysed in-depth to understand the potential development of surf tourism in the future. Sustainable development in surf tourism must be achieved. Many negative impacts of surf tourism on the environment, local economies, and local communities, despite its nature-based and spiritual origin, were identified. That is why the opportunities for Western European surf tourism to become sustainable are examined. A variety of sustainable measures and concepts for surf tourism will be presented.

A field study was conducted that researched the future development of commercial surf tourism. Thereby, the extent of surf tourism growth and the presence of sustainability in surf tourism businesses were identified. The results revealed a further increase in surf tourism and a great interest in sustainability. A difference between interest and realisation of sustainability could be discerned. The study showed that surf tourism will grow in the future. At the same time, it can set a benchmark for sustainable adventure tourism if it implements the rising offer of sustainable alternatives, like recyclable surf equipment, green transportation, and green housing maintenance.

Keywords
Surf tourism, sustainability, sustainable development, commercial surf tourism, Western Europe

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1   Introduction

1.1   Background

Trends in the growing tourism economy show an increasing interest in adventure tourism and sustainable travel in Europe (UNWTO 2014, 10; CBI Ministry of Foreign Affairs 2021). Climate change and environmental protection are the leading topics of our modern society, with constantly rising significance (European Commission). Furthermore, a healthy and active lifestyle has moved in the focus of many people (WHO 2018). The World Tourism Organisation (2014) recognised this development in the behaviour of many tourists. Exciting, active, and sustainable travel attracts increasing numbers. The desire for new experiences while also having a green footprint is driving the tourism market. (UNWTO 2014.) The quite unpopular water sport surfing benefits from this trend. As a nature and ocean-based activity, it satisfies the needs of many people. (Rashaad 2018.) In addition, it has the potential to play an important role in sustainable travel in Western Europe. The direct relation to the nature and ocean combined with the generally open and grounded mind of surfers, build a foundation for sustainability. (Teixeira 2017; Carter 2022.)

The first participation in the Olympic Games in Tokyo in 2020, the construction of modern, artificial wave pools, and the fast-rising number of surfers and surf events worldwide indicate that surfing has overcome its position as a niche sport (Arroyo et al. 2019; isasurf a). The water-based activity is booming. Surf tourism establishes one of the fastest growing sectors of adventure tourism (CBI Ministry of Foreign Affairs 2018; Ross 2019). Ross (2019) claims that the activity has the potential to become one of the most popular forms of adventure tourism. In consequence, also Western Europe is experiencing extensive growth in surf tourism (CBI Ministry of Foreign Affairs 2018). Nevertheless, only a few information about Western European surf tourism is available and further research is necessary (Barbieri & Sotomayor 2013). From this research, touristic service providers, local communities and governmental institutions benefit. By better understanding this fast-growing tourism market, future business planning can be adapted.

Apart, surf tourism can provide a benchmark for sustainable adventure tourism. (SurferToday 2017.) The latest global developments concerning climate change make clear that changes in the tourism industry are necessary (Martin 2019). Surf tourism is directly related to the ocean. The ocean establishes its main resource. Its protection is crucial for surfers (Larson et al. 2017). Thus, surf tourism offers various solutions being an example for general and other adventure tourism sectors (isasurf b). The research of the thesis will contribute to the evaluation of already existing, functioning measures of sustainable surf tourism.

Thereby, useful, and practicable information for institutions involved in this market will be provided.

The analysis of the future development of surf tourism in Western Europe is essential. It will first help to make assumptions about the extent it will have in the future. And second, to understand its opportunities and chances for sustainable tourism.

1.2 Objective and delimitations

The overall objective of the thesis is to study the future development of surf tourism in Western Europe. In this context, it will be examined how its dimensions will develop and what opportunities it has for sustainable adventure tourism. This will be achieved by an analysis of the driving factors of surf tourism. Meaning the reasons and motivations of tourists to participate in it. Besides, the understanding of how surf tourism can set a benchmark for sustainable adventure tourism will be provided. The goal is to show how surf tourism can grow constantly while simultaneously being sustainable. Besides, the thesis aims at providing information on surf tourism research in Western Europe.

The thesis only deals with surf tourism related to wave surfing – not wind or kite surfing. Only wave surf tourism will be examined. Wind and kite surfing function under various circumstances and show significant differences from wave surfing in the availability, potential locations, and community. (Kitesurf 2020.) Therefore, the thesis is limited to wave surfing.

The content of the thesis focuses on coastal surf destinations of the mainland of Western Europe. In the context of surf tourism, Western Europe includes the destinations of France, Spain, and Portugal. These locations build the core of Western European surf tourism. (Lay 2016; Vincej 2020.) Thus, the study of the three destinations provides the most reliable information for assumptions regarding the wider market. The United Kingdom is popular in European surfing, but not as important for commercial surf tourism. Therefore, the United Kingdom is excluded from the analysis.

Data concerning past numbers of surf tourists in Europe are scarce (Barbieri & Sotomayor 2013). That is why the thesis will mainly focus on examining the fascination and motivation of surf tourists. In focus are the reasons for the development, not the statistical illustration. Nevertheless, to some extent, the history and development of European surf tourism will be presented. The analysis containing statistical data and the reasons for growth will help to make future assumptions about surf tourism.

The thesis deals with people carrying out the activity of surfing. Spectators of surf events not participating in surfing will be irrelevant to the analysis. This is justified by the closer

connection to event and sports tourism than adventure tourism (UNWTO a). In addition, the research only studies surf tourism businesses and no single surf tourists. The surf tourism companies are the driving force concerning the increasing number of surf tourists. In consequence, these provide the most reliable information. The general development of surf tourism in Western Europe is represented by the behaviour and actions of the businesses.

1.3 Research questions

- **How will Western European surf tourism develop in the future concerning growth and sustainability?**

  - What are the driving factors of surf tourism?

  - How will the number of surf tourists develop in the future?

  - What opportunities does surf tourism have to be sustainable?

  - How are surf tourism companies working towards sustainability?

1.4 Thesis structure

The structure of the thesis will be as follows:

1. Introduction

2. Analysis of the development of surf tourism in Western Europe

3. Sustainability in surf tourism

4. Research methodology

5. Empirical study

6. Conclusion

The introduction will present the topic. The background of the thesis and its value for the tourism industry will be explained. Objectives and delimitations will be made clear. Corresponding research questions will be formulated. The structure of the report will be illustrated. After that, the theoretical framework builds the required knowledge about surfing, surf tourism and sustainability in surf tourism. The development of surf tourism in Western Europe will be analysed and the reasons why people participate in it made clear. Besides, general concepts of sustainability and the opportunities of Western European surf tourism for sustainability will be examined. The provided information will build the foundation for the research.

The research methodology will explain in detail how research has been conducted. It builds the theoretical basis for the empirical study. A two-piece online survey was carried out. It investigated the potential future development of surf tourism in Western Europe and the openness towards and application of sustainable measures in surf tourism companies. After the theoretical foundation is made, the empirical study will present, evaluate, and explain the results of the research precisely. Furthermore, the results will be used to make reliable and defensible assumptions about the future development of surfing. The conclusion will summarise the results of the thesis. Its success will be evaluated and the future development of surf tourism in Western Europe discussed. Reasons for further research will be given.

1.5 Theoretical framework

The theoretical framework will be split into two main parts.

The first part will deal with the analysis of the development of surf tourism in Western Europe. The reasons for its growth will be studied. To get a first, general understanding of surfing and its culture, the water-based activity will be defined. In the following, surf tourism will be defined and classified within the tourism industry. This further helps to understand the exact dimension of it. After that, surf tourism and its past development in Western Europe will be illustrated and examined. Followed by an analysis of the reasons for the increasing number of tourists. This includes the different factors driving surf tourism.

The second part of the theoretical framework consists of the presentation of sustainability in surf tourism. First, the term sustainability and its role in tourism will be examined. After that, several theoretic concepts for sustainable surf tourism will be presented and analysed. The adaptability of these concepts will be examined. This builds the foundation for the empirical study, which will research the future development of surf tourism in Western Europe and the openness and activity of surf tourism companies towards sustainability.

1.6 Research method

A two-piece online survey will be conducted studying surf tourism businesses active in Western Europe. These mostly are companies running surf hostels, surf camps or surf schools. The companies under research need to be located in either France, Spain or Portugal. The three countries are the top destinations for surf tourism in Western Europe. Therefore, the decisive objects to examine. The survey will research two main questions:

- How did surf tourism develop in Western Europe in the last decade and what can be expected from its future?

- How open and active are the Western European surf tourism companies towards sustainability?

The objectives of the research are:

1. Prove the growth of surf tourism in Western Europe

2. Provide reliable data for the research of surf tourism in Europe

3. Prove a high interest and potential for sustainability in the surf tourism industry

4. Determine how expanded sustainability in the surf tourism industry already is

The research will focus on a fair distribution among the locations of the different companies. This is crucial to exclude country related differences. Such could influence the accuracy of the results. In consequence, at least five operators each, from France, Spain and Portugal should be questioned. The survey will produce mainly quantitative but also qualitative data:

Quantitative data:

The main part of the research about the future development of surf tourism in Western Europe will produce quantitative data. Information about the number of guests, demographics like age structures and first or repeating visitors will be obtained. Furthermore, data concerning the number of operators involved in sustainability will be produced.

Qualitative data:

Most qualitative data will come from the research about the openness and ideas of surf tourism companies regarding sustainability. The interest and feelings of the questioned provide information about potential future developments.

To collect the data the online tool Google Forms was used. It allowed a fast distribution of the questionnaire and simplified the analysis of the results. The locations of the surf tourism companies reached from Northern France to South Spain. That is why an online tool was the most convincing application. Information could be gathered fast and processed immediately.

1.7 Sources

For the thesis report reliable online and academic sources are used. These are books, articles, papers, and internet material, like blog posts of popular surf magazines. Since the topic of the thesis is quite new and lacks extensive research, most sources will be found online.

A large part of the knowledge about the activity, history and the development of surfing is extracted from the book *The history of surfing* by Matt Warshaw (2010). Information about surf tourism is obtained from online articles, journals, and official tourism organisations. Besides, book sections of surf experts are used to collect data. The Center for Surf Research provides a large amount of reliable and qualitative sources. These provide most of the knowledge used in the sustainability part of the thesis. The sources are mostly academic articles and journals of experts in the field of surfing. Additionally, online publications which report on new developments and technologies for environmental protection are used.

In addition, research was carried out to obtain primary data. In this way, new information could be added to the field of surf tourism research. It helped to get a better understanding of the future development of surf tourism in Western Europe concerning its growth and adaption of sustainable measures. The theoretical knowledge to carry out research was obtained from the book *Essentials of Marketing Research* by Tony Proctor (2005).

2   Analysis of the development of surf tourism in Western Europe

2.1   Definition of surfing

A general definition describes surfing as the riding of a wave alongside the beach. This can be done prone, sitting, or standing. Furthermore, the term surfing does not define the use of a board, canoe or just the body. (Martin & Assenov 2012, 257.) Surfing just means using the power of a wave to move with it (Ford & Brown 2006, 149). Such, a very broad definition creates a foundation for many discussions. Other water-based activities which are called surfing, like wind and kite surfing, had been introduced (Booth 2018). Although they contradict the idea of using the power of the wave. Other forces, in this case, the wind, create the surf (Kitesurf 2020, Pegasus). In addition, bodysurfing also contains the term surfing. No equipment is used at all (Definitions). These circumstances bring up uncertainty about what activity is meant when talking about surfing.

The most common definition that has been established in our society is one of people, standing on a board, riding on the wall of the wave. This person is known as a surfer. (SurferToday a; Cambridge Dictionary.) In Western Europe, it is the most popular form of surfing (statista). Therefore, it has been established as the main definition. In this context, when talking about surfing and surfers in this analysis, the standing wave riders are the subjects under research. Not wind or kite surfers, nor bodysurfers.

Next to the definition of the term surfing, the definition of the activity surfing exists. Since it requires active body engagement and physical activity, it is defined as a sport (Steinberg 2018). Others claim surfing to be more than just a sport. It is also respected as a lifestyle, religion, and culture (Yogis 2017). Various interpretations make it difficult to categorise the activity of surfing. The reasons can be found in its long history. From being a religious motivated activity and core of the culture in ancient Polynesia, it has become a high-performance sport (Booth 1995).

2.2   Definition and classification of surf tourism

Buckley (2002a, 407) defines surf tourism as travel of at least 40km and overnight stay with the primary purpose of surfing. International and domestic travel are included in this definition. Furthermore, the duration of the travel may not exceed 12 months. (Dolnicar & Fluker 2004.) To substantiate the definition, Ponting (2008) refers to the activity of surfing a wave and using the power of the wave. Thereby, the definition excludes spectators and non-surfing travellers. Misunderstandings with other close activities like wind and kitesurfing are

prevented. Surf tourism includes people who mainly surf while travelling. These surf tourists can be distinguished further.

2.2.1 Three types of surf tourists

The in-depth definition of surf tourism creates three main categories of surf tourists:

- independent individual surfers
- recreational surfers
- commercial surf tourists. (Buckley 2002a.)

Travel behaviour, interests and motivations for surfing determine the basis for the differentiation. The three groups react diversely to environmental and social circumstances. In addition, several behavioural patterns are perceived. (Dolnicar & Fluker 2003; Barbieri & Sotomayor 2013; Sotomayor & Barbieri 2016; Portugal et al. 2016.) The categorisation of surf tourists helps to understand their potential future decision-making and behaviour in the surf tourism market.

Independent individual surfers

Independent individual surfers focus completely on the surf experience (Warshaw 2010, 152-412). According to Buckley (2002a), the purpose of travel is to surf in good surf conditions and to discover new surf spots. Factors like the quality of the weather and the destination do hardly influence the travel. The decisive factor is the quality of the wave. Surfing perfect waves and improving one's surfing abilities are the central motivations of this group. (Buckley 2002a.) Travel is carried out independent of any companies and businesses. The interest in travelling comes from the sport itself (Reis & Jorge 2012). Surfing determines the choice of a destination, not cultural or natural characteristics. Besides, independent individual surfers possess surf equipment and do not rely on any surf tourism businesses. Travel is carried out with the equipment. Thereby, surfing is possible in any place generating waves. No surfing infrastructure is necessary. (Warshaw 2010, 152-296.)

Recreational surfers

Recreational surfers respect surfing as a pleasant activity during leisure time. The sport opens a space to escape the stress of daily life. Many health-promoting qualities are connected to surfing. The motivation of recreational surfers lies in the joy and feelings of the surf experience. (Lazarow et al. 2009.) The quality of the waves and improving the surfing skills are not as crucial as for individual surfers (Reis & Jorge 2012). Reis & Jorge (2009) discovered, that with the motivation for recreation, the general qualities of a destination become more important. Weather and climate influence the decision-making. Surf travel is

accompanied by an interest in the local culture and nature. The sport surfing is carried out less often than by independent individual surfers. (Dolnicar & Fluker 2003.) The possibility to surf influences the choice of destination, but only as one of several factors. The travel is mostly executed independently of surf tourism operators. (Sotomayor & Barbieri 2016.) Still, recreational surfers may depend on surf businesses like surf rental companies, when visiting foreign places.

Commercial surf tourists

Commercial surf tourists do not travel independently. The travel is organised by surf tour operators and several surf tourism businesses. Most commercial surf tourists are inexperienced surfers (Brochado et al.2018). Insufficient knowledge about the sport makes them fall back on specialised surf tourism businesses. (Ponting & McDonald 2013.) According to Warshaw (2010), surf travel establishes a new adventure for tourists. The motivation results from an interest in a new activity and self-realisation. Commercial surf tourists do not possess any surf equipment and rely on surf tourism companies. Not only the surf experience, but the whole trip is the product. (Brochado et al. 2018.) Commercial surf tourists choose the destination according to its overall offer. The quality of the waves plays an insignificant role. Characteristics like climate, culture and nature of a destination have a stronger impact on the decision-making than the surfing itself.

Commercial surf tourists are the fastest growing category. The general growing number of surf tourists is especially forced by the fast expansion of commercial surf tourism. (CBI Ministry of Foreign Affairs 2018.) It represents a simplified introduction to the sport. Many people who discover surfing during a commercial surf journey, generate a big interest in it. Repeated participation in surf travel will raise the skill level. With the increasing abilities in surfing, the desire for independence grows. Commercial surf tourists may become recreational or independent individual surfers. In this way, commercial surf tourism acts as a drive for surf tourism. The three categories of surfers are not closed. Movement from one to another group is possible, depending on the change in motivation and travel behaviour.

2.2.2 Classification of surf tourism

As surfing is a sport, relating it to sports tourism is appropriate. But for most surfers, the activity is more than just that. It is a lifestyle and a subculture (Yogis 2017). The sports factor does exceed the culture and community related to surfing. Because of this, a wider classification fits better. A categorisation fulfilling these criteria is the one as adventure tourism. (Reynolds & Hritz 2013.)

The Adventure Travel Trade Association (ATTA) defines adventure tourism as a touristic activity including physical activity, cultural exchange, or activities in nature. Through the definition, all aspects of surfing are included. Not only the physical activity but also cultural and natural aspects. In addition, the definition does not make any statements about competition. Compared to other sports, the competition in surfing is low. It is a self- focused activity. Surfers of all levels interact together. (Faria 2012.) On the other hand, sports tourism has competitive motivations. Major sport events and tournaments create the motivation for travel (UNWTOa). In surfing, the experience and the discovery of new waves, cultures, and destinations is important. In consequence, defining surfing as adventure tourism is more appropriate.

Within adventure tourism, surf tourism is classified as soft adventure tourism (UNWTO 2014, 12). This categorisation is based on the low risk of the activity. In addition, the main purpose of surf tourism is to have fun and enjoyment. Rarely physical discomfort is created. (Alwi 2020.)

2.3   Surf tourism in Western Europe

Surf tourism is a globally growing form of adventure tourism. This growth is reflected in the European surf tourism market. (CBI Ministry of Foreign Affairs 2018.) Most surf tourism takes place on the Western coast of Europe. France, Spain, and Portugal establish the popular surf destinations. Still surfing is possible in other European countries bordering on the Atlantic Ocean. (Surfers Hype 2022.) Nevertheless, the main contribution to surf tourism comes from the three labelled countries. Therefore, these will be the object of analysis.

Global surf tourism is estimated to be worth between \$31.5 and \$64.9 billion (Surf Industry Member Association). The international surf association ISA reports more than 35 million surfers worldwide. According to Hritz & Frazidis (2018), the number of surf member nations has more than doubled since 1997, from 72 to 164 in 2015. The global growth of surf tourism influences the European surf tourism market (The Portugal News 2019). Due to a lack of surf tourism research in Europe, no statistical data about its development is available (Barbieri & Sotomayor 2013). Nevertheless, overall fast growth is perceived. Surf tourism is determined to grow between 12-16% per year (Hritz & Frazidis 2018). Separated data from the three destinations France, Spain and Portugal was obtained. Thereby, assumptions for the general Western European surf tourism market were possible.

2.3.1 History of surf tourism in Western Europe

Warshaw (2010) claims surfing as being one of the oldest sports in the world. The first people to ride waves were the ancient Polynesians. Surfing was a tool to appreciate and connect with the ocean and nature. Riding waves was a spiritual activity and differed clearly from the surfing known today. With the discovery of the world, surfing was discovered. (Warshaw 2010, 14-37.) At the beginning of the 20th century, the sport started to spread around the world (Warshaw 2010, 38-89). Occasional observations of people trying to surf in Europe were made between 1910 and 1950, but no real introduction to the sport in Europe happened. The official starting point for most people is determined in 1956 in Biarritz, France (Warshaw 2010, 133). Therefore, Biarritz is regarded as the surf capital of Europe. (wyvesurf 2021.)

Inspired by the first attempts at surfing, young people imitated the activity (Warshaw 2010, 133). Only three years later, the first European surf club and surf brand were founded in 1959. (Centro de Investigacíon de la Historia del Surf.) With a rising availability of surfboards in Europe, surfing spread fast. People in France, Spain, Portugal, and England started to surf. During the discovery of surfing in Europe in the 1960s, surfing was experiencing a huge development. New materials and equipment were introduced. (Warshaw 2010, 152-233.) As consequence, European surfing quickly adapted to the latest inventions of surfing. Thus, a fast growth was caused. (SurferToday 2021.) Several surf brands and companies established along the Atlantic coastline. According to Warshaw (2010), surf tourism in Europe was delayed, compared to other surf destinations like America or Australia. The destination was still unpopular. In consequence, its attractivity was extremely high. Since the production of the first surfboards in Europe, the activity grew exponentially (wyvesurf 2021). New surf spots and destinations were discovered daily.

Europe became famous as a high-quality surf destination leading to a global rising interest. (Warshaw 2010, 152-346.) Rising numbers of surf tourists were estimated since the beginning of European surfing in 1956. The biggest surf companies and brands settled down in Europe and supported its commercialisation. Today, some of the biggest events take place in France, Spain, and Portugal (isasurf a).

2.3.2 Surf destinations in Western Europe

The popular surf destinations of Western Europe lie on the Atlantic coast, reaching from the Aquitaine region in southwest France to Andalusia in Spain (Lay 2016). Every open coast facing the Atlantic Ocean creates a potential surf spot. The result is a huge amount of surf locations and a diverse offer of different waves. France, Spain, and Portugal have world

class surf breaks each. (Vincej 2020.) Official competitions of the World Surf League take place there (WSL). Furthermore, Portugal has the first sustainable surf region worldwide, namely Peniche (STOKE 2017; Teixeira 2017). For a surfer, the Western European coast is a paradise. Unlimited surf breaks wait to be discovered. Each unique. (European-BestDestinations.) And all are reachable in one trip without using the aeroplane once.

2.3.3 Demographics of surf tourists

When people think of surfers, the image of drug-using, non-working hippies comes to mind (Warshaw 2010, 253-258). A simple and nature close lifestyle is expected. While this image represents the surfers of past times, especially 1960-1990, the characteristics of the surfer have changed. (Warshaw 2010; Sam 2018.) Today, the average surfer is male, around 34 years old and mostly single. In contrast to the simple image of a surfer, the majority are highly educated and work in steady employment or self-employment. (Barbieri & Sotomayor 2013.) The average surfer receives a comparable high income of $75000 in the United States. (Swann 2022; WaveLoch.) Trends show an increased participation of women in surf tourism. With a huge group of new potential customers, the growth of the market will be further pushed. (Royal 2018) The presented results come from global or United States based research. To identify if there are any differences in the European surf tourism market, a study conducted in Portugal will be examined.

Portugal and her colleagues (2016) conducted a survey examining the demographics and interests of surfers in Portugal. The following table shows the results of the survey concerning the demographics of the questioned surfers.

Socio-demographic indicators	N	%
Nationality		
Portuguese	177	88.5
Others	23	11.5
Sex		
Male	165	82.5
Female	35	17.5
Age group		
18 - 30	72	36.0
31 - 43	99	49.5
≥44	29	14.5
Mean (in years)	34	
Standard deviation	±9	
Marital Status		
Single	119	59.5
Married	68	34.0
Others	13	6.5
Education Level		
9th Grade or less	7	3.5
Secondary School (12th grade)	42	21.0
Higher Education studies (Graduated)	100	50.0
Post-graduate studies (Master or PhD)	51	25.5
Working situation		
Working to others	108	54.0
Owners of companies or self employees	44	22.0
Student	40	20.0
Others	8	4.0
Income		
Without income	28	14.0
≤€500	14	7.0
501-€1000	57	28.5
€1001-€1500	30	15.0
>€1500	19	35.5

Table 1. Socio demographic characteristics of responding surfers (Portugal et al. 2016)

The results of the survey show overall similarity to the demographics of surfers on a global scale. Since education, labour market and affluence in France, Spain and Portugal are akin, these demographics are translated to the Western European surf market. The percentage of women involved in surfing is probably higher today than in 2016.

2.3.4 Suppliers of the surf tourism market

Commercial surf tourism operators

The growing interest in surfing has created a commercial surf tourism market. Companies offer entire surf travels that include transport, accommodation, surf lessons plus equipment, and food. Several packages and categories are available. (Buckley 2002b.) The companies focus especially on non or inexperienced surfers. No skills or experience in surfing is necessary. (Brochado et al. 2018.) In consequence, it becomes attractive for all those interested in trying the water-based activity. (Stokes 2022; lapoint.) Commercial surf tourism

operators are the driving force in the growth of surf tourism. Many new people are introduced to the sport due to the availability and accessibility the companies provide. (Brochado et al. 2018; Wilson et al. 2021.)

The surf tourism companies run surf camps or surf hostels where many people are accommodated at the same time (Buckley 2002b). Surf courses include mostly around eight people. Through these actions, large numbers of tourists start to surf at the same time. (Brochado et al. 2018; Planetsurfcamps; Puresurfcamps.) The companies usually offer other activities next to the surf lessons and create a whole surf experience. (Ponting & McDonald 2013.) The combination of surfing and other services makes the business concept attractive. Many people who travelled with a surf company once, will do it again. (Brochado et al. 2018; Wilson et al. 2021.)

Surf schools

Surf schools are related to the surf tourism companies but also work independently. The product is the surf lesson. Such businesses facilitate the try-out of surfing. A safe environment is created. (SurferToday 2013.) People who tend to surf but are afraid of the risks give it a try. A non-surfer would avoid to go surfing independently since the risks and the unfamiliarity are too high. This gap is closed by the surf schools and surf lessons. (Drughi 2021.)

Surf shops

Surf shops supply wave riders with surfboards and equipment. For surfers who do not have the equipment, but surf independent, surf shops are crucial. Surf tourism is enabled through the availability of equipment by surf shops. The companies rent surfboards, wetsuits, and leashes. In addition, surf products like clothes, fins and surf gear are sold. Surf shops contribute to the surf tourism industry since they assure the supply of equipment for foreign surfers. (SurfriderFoundation 2009.)

2.4   Reasons for growing surf tourism

The growth of the surf tourism industry is caused by various reasons. In combination, several factors led to the fast development perceived today. On the one side, the growth is directly connected to the development of the sport surfing. On the other side, the increasing number of surf tourists is related to the nature of the activity surfing itself. Further reasons are the commercialisation, accessibility and availability of surf tourism. (SurferToday.)

2.4.1 Progression of surf equipment and technology

Surfboard availability

The most crucial factor for the exponential growth of the surf tourism industry is the fast progress in surf equipment production (Warshaw 2010). Surfboards developed from hand-crafted products to industrial mass products. The availability and affordability rose quickly. Everyone who wanted to have a surfboard could buy one. (Boone.) Surfboards became a product of simple reachability. Feldmann states that the progress in the weight, shapes and materials of surfboards had a big impact. The decreasing size and weight of the boards facilitated the transportation. To take a surfboard with one in a commercial aeroplane, bus or car was no longer a problem. New materials were robust and survived harder conditions. Large numbers of different shapes and sizes enabled everyone to find the perfect surfboard. (Warshaw 2010.)

New inventions

Three deciding inventions changed surfing. The development of wetsuits, the development of fins, and the invention of the leash. (Warshaw 2010.) Wetsuits are bodysuits made of neoprene. The suits protect the surfers from cold water. It became possible to stay in the cold waters of the ocean for several hours. This invention enabled surfers to ride waves in every place around the globe. Freezing waters were no longer an obstacle. New destinations could be tapped. Surfing became accessible all around the earth. The sport was no longer limited to tropical places with warm waters like its place of origin Hawaii. (Warshaw 2010; Sheppard 2018; Salmon 2021.)

Next to the new accessibility, the quality of surfing improved rapidly. According to Warshaw (2010), the invention of fins made it possible to control and steer the surfboards. Fins are sharp rudder blade like parts that are screwed to the back of the surfboard. The water flows through the fins and allows the surfer better control over the board. This invention changed the surf completely. It allowed new manoeuvres. The difficulty of surfing became less, and the opportunities and enjoyment grew. With the two inventions, it became easy to ride waves everywhere around the world. (Warshaw 2010, 38-90; Sheppard 2018; Salmon 2021.) The fins decreased the level of skill necessary to ride a surfboard. Thus, the sport became suitable for a larger consumer base.

Surfing is always connected to a certain risk. This risk got lowered with the invention of the leash. (Warshaw 2010, 234-296.) The leash is a plastic rope that connects the surfboard and surfer. When a surfer wipes out, the board stays close. The board cannot be washed away. When the surfer comes back to the surface, the surfboard is in reach. The risk of

drowning was lowered significantly. The safety of surfing improved tremendously with this invention. Furthermore, a wipeout did not mean leaving the water and looking for the washed away surfboard at the beach anymore. Altogether the invention of the wetsuit, fins and leash had a huge impact on the development of surfing. The sport became safer, better, and more accessible. (Warshaw 2010; Sheppard 2018; Salmon 2021.)

Supporting technologies

The progress in technology facilitated the life of humans in every area. In consequence, it also contributed to the development of surfing. Wave and sea swell forecasts were introduced (Haro 2014). Surfers could prepare for approaching conditions of the ocean. More reliable statements about the quality of the waves could be made. The probability to be at the right spot at the right time grew with increasing knowledge about the conditions. Surfers could estimate the quality of waves weeks before they hit the coastline. (Thornton 2012.)

The invention of the Jet-ski increased the safety and possibilities of surfing. Nowadays, heavy wave breaks are always accompanied by jet skis (WSL). If surfers have a wipeout, jet ski drivers move them outside of the dangerous zones of breaking waves. Without the safety of being rescued, surfing would still be way more dangerous. Furthermore, the jet skis pull surfers into big waves. Many big waves cannot be paddled for. Sufficient speed is necessary to enter them. Jet skis enabled safe big wave surfing. The surfers are pulled with a rope inside the waves. Then the rope is released and the surfer rides on his own. (SurfEurope 2007.)

2.4.2   Commercialisation of surfing

Surf magazines and movies

With the rising popularity of surfing a broad number of surf magazines and movies were produced (Warshaw 2010 152-233). The introduction of the sport in the entertainment industry increased its popularity. (Krause 2012). People never noticing the activity before, became aware of it. A real surfer community developed around the world. The movies and magazines reported on the newest discoveries of perfect surfing spots and equipment. The images and stories forced other surfers to travel to the places or discover new surf spots. A race to find the surfer's paradise started. (Warshaw 2010,152-233.) Surfers began to travel everywhere around the globe. The findings were documented. Thereby, surfing became a global phenomenon. The magazines and movies incentivised the surfers to travel. Surf tourism started to raise. (Jones 2017a.)

The image of an exciting and carefree life of surfers

According to Warshaw (2010), a common image of surfers developed. Surfers became famous for being people who distanced themselves from the capitalistic system of the western world. The joyful and exciting lifestyle of surfers became a tool for marketing and advertisement. The presence of surfing advertisements and commercials that should convey effortlessly and fun increased. (Warshaw 2010, 152-234.) Hotel rooms were being decorated with surfboards, even though there was no surfing at the destination. Suntanned surfers were put on the cover pages of tourism brochures. Products were advertised by professional surfers (Serong 2018). The presence in the media raised the interest in surfing. People associated the sport with positive emotions. Thus, many wanted to try it and became part of the free lifestyle. (Gartside 2019.) This marketing of surfing and surfers is as present today as in the past. Today, the activity is mostly used to promote products regarding beauty and health. (Vogue 2016.)

Surf events and competitions

With the improving quality of surfing, surf competitions took place. The skills of the best surfers were compared. (Warshaw 2010.) The opportunity to see the highest skill level of surfing attracted large numbers of other surfers. Besides, non-surfers could see the opportunities of surfing and became interested in the activity. When foreign people could surf the waves, why should not the locals do it? After surf events and competitions were carried out in a place, the interest and number of surfers grew. Since the events took place in the best surf destinations worldwide, surfing rose globally. In addition, the events lifted the attractivity of the sport since the represented skill level was high. (Nunes et al. 2018; TheWaveShack 2022; WSL.)

Surf brands and surf products

Next to the sport surfing, the lifestyle of surfing was commercialised by surf brands. Several surf products like t-shirts and swimwear were sold all over the world. (Warshaw 2010, 152-234.) These products were not limited to surfers. Many people could not surf but wanted to be part of the free lifestyle. As consequence, the surf products were bought. Through the products, also landlocked places were reached. Surfing became present everywhere, no matter if near the coast or urban areas. (Soteriou 2011; Jones 2017b; Kelly 2021.)

2.4.3 Growing tourism industry

Increasing mobility

The progress in transport technology led to increased mobility of humans in general. Travelling around the world became constantly easier. The result was a boom in tourism and rising numbers of people travelling. The rising tourism activity was reflected in surf tourism. The travel opportunities became bigger and cheaper. Surfers could be at any place in the world in a few days. Advanced transport technology facilitated the movement of people. Surf destinations became reachable. (Dowling 2014; La Rocca 2015; Wikiversity.)

Rising touristic offer

The boom in tourism caused the development of a touristic infrastructure in famous destinations. Hotels, operators, and stores established. (Warshaw 2010.) A foundation for surf tourism was built. Surfers had a place to stay and could use the benefits of the tourism industry. To reach remote destinations became easier. Safety of travel improved. Tourism grew permanently. (Roser; BBC.) Likewise, surf tourism.

2.4.4 Commercialisation of surf tourism

According to Brochado and her colleagues (2018), tour operators and tourism businesses recognised the interest in surfing. Commercial surf tourism was introduced. All-inclusive surf travel with surf courses and free equipment were offered. People who did not have any relation to surfing booked the tours. The surf packages included surfing as an activity next to other travel activities. The availability and accessibility of surf travel increased. The sport became suitable for large consumer groups. (Brochado et al. 2018; Wilson et al. 2021.)

2.4.5 Psychological factors of surfing

Effects of surfing on the brain

Unlike other sports, surfing plays some psychological effects on people (McKenzie 2021). The adrenaline rush that is produced while riding a wave can be addictive. Surfing is like a healthy drug. The feeling results from the environmental conditions the surfer is experiencing, combined with the waiting for and riding of a wave. After surfing a wall of water, the brain is flooded with feelings of happiness. Serotonin, endorphins, and dopamine are released. The surfer wants to repeat the experience. Every wave reproduces the emotions again. As consequence, the surfers go for wave after wave. Once the positive feeling was created, people want to repeat it. That is why most people who tried surfing once, do it again. (Drughi 2019; Northcore 2021; San Diego Surf School.)

McKenzie and her co-workers (2021) describe surfing as a relief from stress and a kind of meditation. During the surf, the focus lies completely on the activity. Problems in daily life are left behind. Thus, surfing may be an escape for many people from the pressure of working life or other trying situations. In addition, the challenge of surfing and the constant improvement support self-confidence and self-focus. (Mc Kenzie et al. 2021; San Diego Surf School.)

Integration into a community

The surf community is open and diverse (Warshaw 2010). The competition between surfers is low and the feeling of community stands in the centre. A surfer rarely feels alone. Making friends is easy. Everyone has the same intention: find good waves and enjoy the ocean. Thereby, travel groups and friendships develop fast. Surfing makes you feel included and part of something bigger. (Everard 2018; Frost 2022.)

The spiritual factor of surfing

During surfing, understanding the origin of the activity is possible. A deep connection to the ocean and the waves arises while being in the water. Surfing becomes a spiritual means for several surfers. It is not about the sport, but to become a part of something inexplicable and bigger. That is why spiritual sports such as yoga stand in close relation to surfing. Discovering oneself and finding peace of mind are reasons for several people to surf. (Blumberg 2014; Frost 2022.)

2.4.6 Rising interest in exciting outdoor activities

People show a rising interest in a healthy and active lifestyle. In addition, the desire for a connection to the nature and environment grows. This development is reflected in the tourism industry. Increasing numbers of tourists participating in activity tourism are perceived. Less purely recreational travel is committed. (UNWTO 2014.) Surfing establishes the prime example of this development. The sport combines activity with a deep connection to the ocean and nature. For many people, it is the embodiment of the new interests. Hence, many tourists, having no connection to surfing, want to try it. Surfing is healthy for the whole body. It serves as a full body workout. The upper and lower body are trained through the different movements. The motion sequences of surfing are the opposite of the unhealthy postures of daily life. In consequence, surfing supports a good posture and strengthens the whole body. (Frank et al. 2009; Frost 2022; Joey.) While doing that, it provides the surfers with a large amount of fun.

3   Sustainability in surf tourism

3.1   Definition of sustainability

Sustainability is one of the most appearing topics of the last decade. Many people using the expression are not aware of its far-reaching meaning. (Dittmann 2019.) The term sustainability has been established because of the rising attention to climate change. Hence, it is often connected with environmentalism. On the one hand that is right. On the other hand, the significance of sustainability reaches far beyond. (Werbach 2009.) It includes several other areas.

Sustainability is defined as a development that satisfies the needs of the current population without lowering the opportunity for future generations to fulfil their own needs (Report of the World Commission on Environment and Development: Our Common Future; TWI). This definition exemplifies that sustainability exceeds environmentalism. Three main pillars were determined: environment, economy, and society (Dittmann 2019; TWI; University of Alberta). When all three pillars are sufficiently elaborated on, sustainability is achieved. The areas are interrelated. The relation between the pillars is illustrated in the picture below.

Image 1. The three pillars of sustainability (Future Learn)

The graphic illustrates the overlapping of the three pillars. If one criterion is not met adequately, sustainability is not achieved. In the following, the pillars will be explained separately. This will provide a better understanding of the interrelations.

3.1.1 Environmental sustainability

Environmental protection and fighting climate change build the core of sustainable developments. The actions of past generations and the consequences of industrial growth had a destructive impact on the globe. Climate change causes perceivable problems, especially in the last decade. Melting poles, more frequent weather catastrophes and expanding drought, jeopardize the life of humans, animals, and plants. (Begum.) Past generations and still the current generation have been exploiting the resources of the earth. Irreversible damage is caused. (Greenfield 2020.) Crucial changes are necessary to slow down and finally stop climate change. Otherwise, no habitable earth will be left for future generations. The threat is clear. Without environmental sustainability, there will be no long-term future for humans. (TWI; Begum.)

Environmental sustainability means preserving nature and to protect global ecosystems (Sphera 2020). According to the University of Alberta, it aims on improving the quality of life of humans while retaining the quality of the ecosystems of the earth. It should be achieved by using natural resources appropriately. Resources should be used in such dimensions that recovery is guaranteed in the long-term. (Report of the World Commission on Environment and Development.) Thus, a resource is not depleted, but humans still profit from it. This process describes sustainable development. For instance, 3 hectares of forest are felled for industrial production. Environmental sustainability would be to plant at least three new hectares of trees. Thereby, the created gap in the ecosystem could be closed in the long-term. Apart from exploiting natural resources, the greenhouse gas emissions of the industry and humans' modern way of life have the strongest influence on climate change. A drastic reduction of emissions is necessary. Greenhouse gas emissions are the main reason for global warming. Environmental sustainability demands the highest reduction possible. Furthermore, waste production and nature threatening products need to be reduced. (TWI; Living Sustainability.)

Environmental sustainability describes the protection and conservation of nature by behaving in the least harmful way possible. Sustainable development should not have any negative effect on the quality of nature. (Dittmann 2019.) If any, then supporting and reviving. Environmental sustainability relates to every individual. It encourages every human to act in the most sustainable way possible. Starting with small steps like means of transportation and waste separation. (youmatter 2020.)

3.1.2 Economic sustainability

Economic sustainability relates to the industry, businesses, and communities. These have a social responsibility. Integration of environmentally friendly measures and processes stands in the focus. Sustainability means economic growth without harming the environment and society. Companies should use resources in a depletion excluding way. Emissions and negative impacts on the environment need to be reduced to a minimum. At the centre of business developments should be the long-term well-being of the earth. Not short-term profit-oriented processes that endanger the quality of life. (Krugman 2022.)

3.1.3 Social sustainability

Social sustainability describes the supporting development of societies. The objective is to improve the quality of life and health, to strengthen diversity and democracy, and to develop communities. In addition, social sustainability means integrating into an existing community without harming it. (United Nations Global Compact.) It includes the support and preservation of culture.

3.1.4 The interrelation of the three pillars of sustainability

Sustainability affects all three main areas environment, economy, and society. When speaking of sustainable development, all factors need to be considered. When one criterion is fulfilled, it does not mean that the others are. (FutureLearn.)

Especially in the tourism industry, businesses lack an overall understanding of sustainable development. If a business is environmentally friendly, it does not concurrently mean that it is integrated into the local community. Thus, speaking from a sustainable business is not possible. To be a sustainable tourism business the integration in and the support of the local economy and society need to be maximised, while ecological protection needs to be fostered.

3.2 Evaluation of sustainability in surf tourism

Sustainability in surf tourism is a controversial topic. On the one hand, surfers have a deep connection with the ocean and nature. Hence surfers respect nature and care a lot about the environment where surfing happens. The natural resource ocean which generally makes the sport possible needs to be protected. (O'Birien & Ponting 2013; Butt 2015; Springwald 2018.) On the other hand, the sport itself requires a lot of travelling. To reach the various surf spots worldwide, surfers must use the aeroplane. Furthermore, the traditional way of surfboard production uses environmentally harmful materials. (Quiver 2019.)

This contrary between the sport's sustainable nature and its unsustainable execution needs to be analysed.

3.2.1 Positive arguments for sustainability in surf tourism

Environmental protection

The roots of surfing lie in a strong connection between humans and nature (Warshaw 2010). This idea remains in the minds of most surfers. A strong connection with the ocean and its environment is shared in the community. Surfers are aware of the natural resources ocean and waves. (O'Brien & Ponting 2013; Butt 2015.) Thus, the maintenance of the current quality of a spot is crucial. This reflects in the way how most surfers behave on the beach and during travelling. The current condition of a location should not be worsened through the actions of a surfer. When wave riders are in a place, almost no pollution can be found on the beach and in the area. Surfers respect the environment. (Springwald 2018). Environmental pollution is avoided. More likely, active beach cleaning and support of nature are carried out. Many surfers are active on overall beach clean-up days. Besides, the support for environmental protection is large in the community. Surfers tend to participate in sustainable programs and environmental organisations. The undisputed connection to nature makes wave riders feel responsible for it. (Bludau 2018; Kaminski 2021.)

The sport of surfing itself does not cause any harm to the environment. Surfing uses the power of the ocean and does not influence its quality. No destruction or alteration is done to the ocean when riding the waves. (Warshaw 2010; Timothy.)

Economic sustainability

Surf tourism offers the opportunity to develop destinations without any special touristic attractions (Murphy & Bernal 2008). Surfers act as initiators of new tourist destinations (O'Brien & Ponting 2013). Surfers discover a new surf spot, tell friends and the community about it and the destination wins in popularity. The number of visitors of the destination starts growing. Surf businesses settle in the area and the local community profits from tourism (McGregor & Wills 2016). The constancy of waves as an attraction guarantees long-lasting growth. In addition, surf tourism helps established destinations fight seasonality since waves occur all year long (Araujo et al. 2016). Especially in Western Europe, waves are even better in spring and autumn than in the main season of summer. The development of a place as a surf destination boosts the local economy permanently (Murphy & Bernal 2008). Employment is generated. Many locals start to work in surf tourism businesses and supply. The new market benefits the destination by creating several new jobs. (Araujo et al.

2016.) In addition, other sectors like hospitality and restaurant will profit from the rising number of tourists. The destination wins in popularity for tourism in general. (O'Brien 2007.) As consequence, other businesses establish in the region. Thereby the overall economy benefits from surf tourism. When the local community achieves to manage surf tourism in a controlled way, overcrowding of the waves may be avoided. Hence, a sustainable and permanent attractivity of the destination is created.

Most surf business owners are surfers. In consequence, the same characteristics of surfers regarding sustainability are shown. The opinions and ideas of environmental protection are translated to the surf businesses. Nature supporting activities and the awareness of sustainability are mostly present in surf companies.

Social sustainability

The empowerment of a local economy results in a decrease in poverty in the destination. In consequence, growing surf tourism does have a positive effect on society. (Thomas 2019.) In addition, many surfers have a big interest in culture and prefer to mix up with local communities (Araujo et al. 2016.). As great respect for nature exists, mostly respect for the local culture is given too. In consequence, surf tourism values different societies and cultures instead of suppressing them. (Bludau 2018.)

3.2.2 Negative arguments for sustainability in surf tourism

Environmental damage

The biggest issue of surf tourism results from the high amount of travel surfers carry out. To get to the various surf spots, wave riders travel all around the globe. (Warshaw 2010.) The use of aeroplanes as means of transport is mostly unavoidable. Aeroplanes produce large amounts of emissions that damage the environment. (Butt 2015.) In consequence, surf tourism is often accompanied by air pollution and negative impacts on the environment. (surf & mind 2018.) Besides, many surfers travel in pairs or groups by car (Kitaruth 2016.) The total of all surfers travelling by car, instead of sustainable means of transport like trains, contributes to the high production of greenhouse gases.

Another impact of surf tourism on environmental damage arises with the surf equipment. (Vanstone 2013; Gibson & Warren 2017; SurferToday 2019.) 80% of surf equipment is petrochemical based. This makes recycling of the equipment impossible. Broken surfboards, leashes and wetsuits cannot be reused (Warshaw 2010, 468-469). In addition, the production of the equipment causes hazardous waste and pollution. To create a single surfboard, several stages of chemical processes are required. In total CO_2 emissions between 170

and 250kg arise. For comparison, a single tree exploits 164kg of CO_2 in 20 years. (Paulownia 2020.) Surf equipment production influences the health of the environment and the producers negatively (Gibson & Warren 2017).

Besides, the commercial development and growth of the surf tourism market have created new types of unsustainable surf tourists. Many tourists are trying out the water-based activity for recreational and self-realization purposes (Warshaw 2010). Other values and opinions than in the surf community are shared (Sotomayor & Barbieri 2016). The connection to nature and the ocean is not the same. The group of tourists does not care equally about the environment. Waste and trash are brought to the ocean and beaches. This corresponds with the development of surf tourism from a niche to a mass sport. The number of commercial, environmentally unaware surfers rises constantly. (Gartside 2017; Robledo 2020.)

Economic exploitation

The introduction of surf tourism businesses in a destination may benefit the location. But also worsen its condition. (O'Brien & Ponting 2013; Teixeira 2017.) A problem occurs if foreign surf tourism businesses do not integrate into the local economy. The companies act as independent entities and most of the revenue flows back to the country of origin. (Ponting et al. 2013.) Thus, the destination receives the negative impacts of rising surf tourism without any benefit. The local employment remains the same. Tourists who destruct nature and culture arrive. The foreign businesses start to control local beach breaks and destroy the environment of the inhabitants. (Ponting et al. 2013; Gartside 2017; Robledo 2020.)

Ponting and his colleagues (2013) discovered that rising numbers of tourists lead to a decreasing attractivity of the destination. An unsustainable surf tourism economy exploits the resource surf spot. Mass tourism is forced. Since surf spots have a limited capacity, this will cause crowding. The spot becomes unattractive. Surf tourists no longer have an interest in the destination. The foreign companies go with the customers, but a destroyed local environment and economy remain. (Gartside 2017; Robledo 2020.)

Sociocultural destruction

Corresponding to the economic disadvantages of foreign surf tourism businesses, sociocultural problems are created (Ponting et al 2013; O'Brien & Ponting 2013). According to Buckley (2002a), bad integration into the local culture and society will lead to group separation. A split between the local people and the foreign surf tourists develops. The surf tourists move within a closed community. The use of local services is very low. Besides, the foreigners try to displace the local culture with their surf culture. Krause (2012) determines that

tourists can afford higher prices and standards. Consequently, with a rising number of tourists, the price level increases (Buckley 2002a). Local people begin to struggle with the higher costs. The foreigners drive the inhabitants out of their homes. (Gartside 2017; Robledo 2020.)

Directly related to surf tourism is the development of localism (Knaap & Vanneste 2021). Local surfers have a feeling of ownership over the surf spots. The foreign surfers influence the quality of the spot by making it crowded. Thereby a foundation for conflicts arises. If not managed well, a permanent argument between the local and foreign communities lowers the quality of the surf spot. (Robledo 2020.) The conflicts may even degenerate into physical attacks and fights (Warshaw 2010, 261-264).

3.2.3 Managing sustainable surf tourism

The elaboration of opportunities and threats of sustainability in surf tourism shows that the gap between positive and negative effects is narrow. The initial situation is mostly the same, but the approach decides on the level of sustainability. Careful long-term management is necessary to make surf tourism sustainable (O'Brien & Ponting 2013; Martin & Assenov 2014; Teixeira 2017). Chances and problems of rising surf tourism need to be considered. Surf tourism needs to change from pure profit orientation to a sustainable development that benefits everyone involved. (Ponting & O'Brien 2014.) The following part will present opportunities for sustainable surf tourism in Western Europe. By implementing various concepts, surf tourism in Western Europe has the potential to set a benchmark for sustainable adventure tourism.

3.3 Opportunities for sustainable surf tourism in Western Europe

In sustainable tourism, ecological and social costs are put to a minimum and the benefits for the natural environment, the local economy and the society are maximized (Report of the World Commission on Environment and Development: Our Common Future; TWI.) Sustainable tourism does not harm the resources it depends on. It aims on generating profit while supporting the environment and the local communities. Sustainable tourism focuses on long-term planning developing the destinations. The conservation of the environment, a major economic contribution to the local communities and the preservation of local culture and society epitomise the core of the planning. From proper sustainable tourism, foreign and local businesses profit. (Global Sustainable Tourism Council; UNWTOb.) This definition creates the starting point for the following presented opportunities for sustainable surf tourism in Western Europe.

3.3.1 Concepts to become ecologically sustainable

Green mobility in Western Europe

The Western Europe surf destinations are connected via landmasses (GoogleEarth). Hence, an opportunity for sustainable travel is created. Within Europe, the use of an aeroplane becomes needless. Europe has a high-performance train infrastructure (Eurail). Ecological fair mobility is enabled. In addition, many tour operators employ bus companies and manage so-called surf-busses (Brochado et al. 2018; Planetsurfcamps). Thereby, the greenhouse emissions of every single customer are reduced significantly. (European Commission 2021a.) The goal should be to establish a reliable, affordable, and fast surf transport system. Thus, surf travellers could be persuaded to use public transport means to improve their ecological footprint.

Protection of the local environment

The surfers and surf tour operators have a responsibility for the preservation of the environment of the destination. Meaning the beach and the ocean, but also the natural surroundings of the accommodation. Regular beach clean ups should be implemented. Everyone staying at the destination should contribute to its environmental protection. The surf tourism companies furthermore have the responsibility for the behaviour of the customers (Ponting et al. 2013). Education about sustainable conduct regarding the local conditions is necessary. (Goncalves 2020a; SurferToday 2020.) Many European surf breaks are beach breaks (EuropeanBestDestinations). The coast is covered with sand dunes. Dunes protect the land and nature behind the beach. They act as a shield against the power of the ocean and winds. To destruct the dunes may have tremendous effects on the environment of a destination. (European Commission 2021b.) That is why surf tourists need to respect natural resources and behave in the most responsible way possible.

Use of recyclable and ecofriendly surf equipment

Several surf companies are producing recyclable and eco-friendly surf equipment today (Gibson & Warren 2017). Instead of harmful chemical products, recyclable and nature-based materials are being used. In addition, the surfboard producers focus on making the boards as durable as possible. In this way, the creation of waste through broken surfboards can be lowered. The longer a surfboard lasts, the less frequent a surfer needs to buy a new one. New developed recyclable foams and resins in the surfboard industry exist. Thereby, it is possible to reuse broken surfboards to produce new ones. (Quiver 2019; SurferToday 2020; Goncalves 2020a.)

Similar behaviour is perceived in wetsuit production. Various companies try to find eco-friendly alternatives to neoprene. The leading companies have invented a rubber made from natural caoutchouc (Patagonia). The material is obtained directly from nature. The trees necessary to produce caoutchouc regrow. In consequence, a natural resource was found and a sustainable alternative for wetsuits exists. (Quiver; Feldmann de Britto.)

In general, an interest to produce eco-friendly surf material is perceived in the surf industry. More and more alternatives for harmful petrochemical products enter the market including wooden fins, nature-based waxes, recyclable leashes, or substitutes for sun creams. The offer is big. Now it is the responsibility of surfers and surf tourism businesses to make use of such alternatives. (Feldmann de Britto.)

A sustainable mind of surfers and surf tourism companies

Every sustainable development starts with the actions of the different players. Surfers and surf tourism companies need to get aware of the impacts on the environment. A deep understanding of the consequences of their behaviour will influence future decisions:

- Is it always necessary to have the latest surfboards?
- Do I need to travel to other continents to surf?
- Where does the food that I offer my guests come from? (Concalves 2020a.)

These are basic questions resulting in big changes when considered. Once the impact of the players is understood, adjustments are made. In a world of consumerism, the role of individuals loses its significance. But when everybody analyses one's impact, it may lead to crucial changes. The opportunities for sustainability arise from the understanding of it.

Sustainable maintenance of facilities

Often accommodation for the customers is offered by surf tourism companies (Brochado et al. 2018). The maintenance of the facilities has a crucial influence on the local environment. Where the tourists stay, the use of water, the use of energy and the production of waste are high. The surf tourism businesses are responsible to reduce the impact of the facilities to a minimum. With sustainable management and a worked-out supply system, the environmental damage of the surf tourism businesses is lowered. (Garcia et al. 2012.) General concepts of green energy supply, sustainable water use, and waste recycling systems apply to surf tourism (Garcia et al. 2012.)

Surfers who travel independently are responsible for the place of stay. Most surfers stay in hostels, a tent, or vans on a camping place. To respect the rules of the facilities and minimising the pollution and harm on the environment should be in the first place. (WARM-WINDS.)

Reduction of food waste and local food supply

A crucial problem in the tourism industry is the big amount of food waste. Hotels offer large buffets and more food than the guests can eat is available. (Hyland 2020.) Concerning this problem, surf tourism is relatively advanced and establishes a benchmark. This results from the simplicity and modesty of surfers (Warshaw 2010). High luxurious products are rarely necessary. The taste and quality matter. There is a low interest in fancy and overpriced food. Independent surfers cook. Surf tourism businesses adjust the food supply to the number of guests. Many surf hostels work with self-sufficiency. These circumstances reduce the food waste in the surf tourism industry drastically. (Planetsurfcamps, Puresurfcamps.)

In France, Spain and Portugal, agriculture is a broad sector of high quality (EuromonitorInternational 2018). To receive local food is possible in every region of the three countries. A foundation for local food supply exists. Surf companies need to use this resource. When food is purchased from local farmers, the environmental impact is reduced. Food supply, requiring thousands of kilometres of transportation, contributes to the production of greenhouse gas emissions (TheConsciousClub 2019). By shortening the transport distances to a minimum, surf businesses reduce their ecological footprint. A market for local food supply exists. Surf companies need to implement it in their management.

In most surf destinations, weekly food markets take place (Tripadvisor). The yields of regional farmers are presented. Independent surfers could use such markets to purchase food instead of going to the touristic supermarkets. Thereby, not only the ecological footprint is improved, but also local farmers profit economically. Using the local supply establishes an opportunity to reduce the environmental impact and strengthen the local community.

Support of NGOs and environment supporting organisations

Supporting NGOs and other ecological ambitious organisations creates a way to improve sustainability outside of business activities. Next to own measures, surfers and surf tourism companies should be active in such organisations. Thereby, the natural environment is protected further. (Goncalves 2020b.)

3.3.2 Concepts to create economic sustainability

Cooperation with local businesses

Surf tourism companies from foreign countries settle down in popular surf destinations. To be economically sustainable, cooperation with the local businesses should be established. (O'Brien & Ponting 2013; Ponting et al. 2013; Araujo et al. 2016; Bradshaw 2021.) Thereby, the exploitation of the local resources without contributing to the economy is avoided. Such cooperation compromises contracts with

- local surf shops
- local surf schools
- local farmers
- camping places
- other surf tourism companies
- local beach officials.

By working closely together with local companies, revenue flows to the local communities. From a sustainable business model, both local and foreign companies profit. The local businesses provide the necessary infrastructure for surf tourism, the foreign surf tourism operators pull customers. Each party uses the resources of the other, leading to common benefit. (O'Brien & Ponting 2013.)

Destination development

Sustainable surf tourism does not exploit the local resources until the attractivity decreases and leaves the destination afterwards (Ponting et al. 2013). It rather tries to improve the quality of the destination. Long-term plannings developing the destination need to be implemented. These plannings need to include information about the capacities of a destination. (Ponting & O'Brien 2014.) The resource wave has a limited capacity. Surf tourism businesses cannot just expand without considering the effects on the quality of the resource. With increasing numbers of surfers, the quality of a surf spot decreases. (Knaap & Vanneste 2021.) That is why sustainable surf tourism tries to use other resources of a destination. Thus, the overall attractivity is increased and a better distribution of the tourist traffic is enabled. In addition, economic stability is established. If the surf is bad, other attractions in the region will benefit the local economy. (O'Brien & Ponting 2013.)

Use of local offer

Surf tourism businesses rarely offer all-inclusive packages. Mostly, either half-board or self-sufficiency is part of the product. Hence many surf tourists, and the independent surf tourists

anyway, use the local supply. Products from the supermarkets are bought. But also, restaurants, bars and clubs are visited. Since the surf tourists do not stay in closed systems, such as big hotels where everything is available in one place, the local economy benefits from the spending of the tourists. (SaveTheWaves.)

Furthermore, in surf destinations, surf brands and product companies settle down (Warshaw 2010). Where the surf tourists are, the interest in surf clothes and equipment is high. Surf shops are mostly run by locals. When the tourists buy articles in the local shops, the economy profits directly. In consequence, the surf tourists, in general, are attractive to local communities. Using the local offer is of higher interest for surfers than for other groups of tourists. (SaveTheWaves.) Surf tourism is very beneficial for local communities if surf tourism businesses create a fusion between local and business offers. (Murphy & Bernal 2008; Ponting & O'Brien 2014.)

3.3.3 Concepts for social sustainability

Prevention of localism

One of the biggest social issues of surf tourism is localism (Warshaw 2010; Knaap & Vanneste 2021). The rising number of surf tourists leads to a conflict between local and foreign surfers. The locals see the waves as their property. Other surfers are seen as intruders. (Rode 2021.) The quality of the surf experience is lowered through crowding. (Comley.) Social sustainability means not lowering the life quality of the local society. In consequence, a solution for localism needs to be established.

Surfing follows certain principles that regulate the use of waves and behaviour in the ocean. Locals feel attacked since often their priority on waves is not respected by inexperienced surfers not following the rules. (Buckley 2002a; Rode 2021). The surfer closest to the peak – the point where a wave breaks first- has priority on the wave. Each wave should be ridden by only one person. Inexperienced surfers, mostly coming from surf tourism companies, do not follow or understand the priority system. In consequence, the quality of the surf for locals is influenced badly. Between experienced surfers and locals rarely conflicts arise. (Comley.) The reason for the conflict is the bad knowledge of surf etiquette, not the existence of other surfers.

The first crucial step to solving localism and conflicts about the waves lies in the actions of surf tourism businesses. Surf tourism companies need to instruct the customers about the rules and etiquette. If the clients are aware of the rules and behave well in the ocean, many conflicts could be erased (SurferTodayc). The surf instructors leading the surf courses need to guarantee the understanding of the rules and the principles by the students. In addition,

the right use of priority rules should be controlled. If mistaken, further explanation is necessary.

A second way to fight localism is to regulate the surf spots and beaches (Buckely 2002b). The creation of separated surf zones and surf spots could avoid the problem. High-quality surf spots are limited to local and free surfers. No surf schools are allowed. Other surf spots of lower quality serve tourism businesses. Free surfers still are allowed to use them, but the spots are declared as surf school spots. Thus, free surfers are aware of the low level of the surfers there. Mistakes and the breaking of rules can be expected. Such regulations showed success in several destinations and could be expanded further.

Support of local culture

Surfers are travellers (Warshaw 2010). Surfing is the main purpose, but the interest in different destinations around the world accompanies the surfers. Through the deep connection to the ocean and nature, the surfer is open to other cultures. Active participation in local cultures is part of the open surfer lifestyle. Surfers do not harm culture, but rather support and appreciate it. (Lazarow 2007.) Destructing it, is avoided. In surf destinations, a mix of cultures is found. Since the locals mostly are surfers, a fusion of local culture and surf culture appears. In this mixed culture, the surf tourists integrate easily since the surf lifestyle remains the same everywhere (Warshaw 2010). Thereby, surf tourists interact with locals positively and learn about their culture.

4   Research Methodology

4.1   Research Problem

Surf tourism in coastal destinations in Western Europe is an underrepresented topic in academic literature. Hardly any information about the development of European surf tourism and the importance of sustainability for surf tourism businesses was obtained. (Barbieri & Sotomayor 2013.) The behaviour of the market is difficult to predict. Only a few data is available. The theoretical framework presented surf tourism as a fast-growing industry (UNWTO 2014; CBI Ministry of Foreign Affairs 2018). But no information about its future development could be acquired. Furthermore, many concepts for sustainable surf tourism exist, but no information about the degree of application in European surf tourism was obtained.

The depressing condition of the planet shows that crucial changes in the tourism industry are necessary (European Commission). In the past, surf tourism showed a great contribution to the negative impacts of tourism on the environment, local economy, and society (Ponting et al.2005). Concerning sustainable development, surf tourism needs to change. The niche tourism sector establishes a great opportunity for sustainable tourism. Scarce information about the interest and actions of surf tourism businesses towards sustainable measures is available. To understand the future development of Western European surf tourism better, this gap in research needs to be closed. The research problem was established by the question: How will Western European surf tourism develop concerning its growth and sustainability?

4.2   Aim of the research

The aim of the research was to determine the future development of surf tourism in Western Europe. Furthermore, the interest and actions of surf tourism businesses regarding sustainability were studied. The research aims at providing reliable data to the field of surf tourism research. The research wanted to prove that surf tourism is a fast-growing industry in coastal destinations in Western Europe. In addition, it should illustrate the great potential of surf tourism to become a benchmark for sustainable adventure tourism in Western Europe. The opinions and ideas of surf tourism businesses regarding the potential growth of surf tourism and the integration of sustainable measures were studied.

4.3   Population and Sampling

The population of the research were commercial surf tourism companies and businesses. The strongest contribution to surf tourism results from their activity. In consequence, the

most representative population for the whole surf tourism sector was established. The commercial surf tourism companies are located at any Western European surf spot of quality (surfcampseurope). Consequently, not only business but the whole development of surf tourism is observed.

4.3.1 Population

The research studied the opinions and integration of sustainable measures in surf tourism. No independent or individual surfers were part of the population. The main impact on the environment, economy and society comes from commercial surf tourism (Krause 2012; Araújo et al. 2016; Teixeira 2017). That is why commercial surf tourism companies established the population. Surf tourism companies and businesses are the driving forces of surf tourism. The development of the market and the integration of sustainability depends on them (Bradshaw 2021). Furthermore, many independent surfers use the services of surf businesses or companies, such as hostels or camps. Hence, the research reflected the whole development of surf tourism, not only commercial surf tourism. In addition, before becoming independent individual surfers, people use the services of a surf tourism company at least once. Thereby, the growing number of surf tourists is perceived by the companies and businesses.

To be valid for the population, a company or business had to be located on the mainland of France, Spain, or Portugal. Country belonging islands, such as the Azores, Portugal or the Canary Islands, Spain were excepted from the research. The circumstances and living conditions are different on the islands than on the mainland. In consequence, the results of the research would have been influenced. For instance, the food supply and general infrastructure differ between islands and the European mainland. (Castanho et al. 2020.) Including islands would have affected the results, especially concerning the opinions and measures towards sustainability.

To qualify as a surf tourism business, a company had to carry out certain activities related to surf tourism. Thereby, a distinction from other tourism providers was assured. Surf product companies like surfboard producers or surf clothing merchants did not belong to the population. No direct influence on surf tourism is caused. Only the sport surfing itself is supported. To identify surf tourism company, at least one of the following services needed to be provided:

- surf lessons
- surfboard rental
- surf equipment rental

- accommodation related to surfing
- transport related to surfing. (Brochado 2018.)

4.3.2 Sampling

Sampling frame

The sampling frame corresponded to the population. No list or material including all Western European surf tourism companies and businesses existed. The members of the sample needed to be identified individually. The sampling frame included all commercial surf tourism companies and businesses. These are

- surf tour operators
- surf hostels
- surf camps
- surf schools
- surf shops with surfboard rental. (Buckley 2002a; Warshaw 2010.)

Sampling size

Surf tourism in Western Europe is a wide market with many participants. Thus, a large sample size was necessary to obtain reliable results and to make firm assumptions about its future development. The larger the sample size, the better the results (Proctor 2005, 127). The number of surf tourism businesses in France, Spain, and Portugal is unknown. The individual investigation to find members of the population showed that the number of commercial surf tourism businesses and companies is huge. To create reliable results, a large sample size of 75 was determined.

A large sample size minimises the risk of sampling errors. Sampling errors occur if sampling units do not represent the typical characteristics of the population. With a higher sample size, the impacts of sampling errors decrease. Furthermore, the quality of the results increases since deviations are lowered. (Proctor 2005, 127-129.)

Sampling method

Non- probability sampling was used for the research. Precisely, judgement sampling. (Proctor 2005, 120) The most representative valued members of the population were chosen for the research. The focus lay on surf hostels and surf camps. These offer several products of surf tourism such as surf courses, transport, and accommodation. Since hostels and camps are respected as the driving forces of commercial surf tourism, most of the sample consisted of them. The number of surf schools and surf shops in the sample is lower than the number

of full package surf tourism providers. In consequence, the most reliable and firm results were obtained.

To cancel out errors of judgement, companies with different business concepts, price levels and product ranges were selected. In this way, deviations resulting from various business interests were reduced and the best overall results were provided. (Proctor 2005, 120.) A similar distribution between locations - France, Spain, and Portugal - and the size of the companies - small, middle, big - was followed when selecting the sample units.

Judgement sampling was used since the research acquired qualitative and quantitative data. The qualitative data referred to the opinions and measures towards sustainability. Thus, those businesses closest to the topic needed to be studied. The full package surf tourism providers, surf camps and hostels, have a larger impact on the topic than surf schools and shops. That is why judgement sampling helped to determine a sample that would create the most valuable results. (Proctor 2005, 120.)

A further reason for choosing judgement sampling was the limited access to a sample frame (Proctor 2005, 120). Each sample unit needed to be found individually. To gather every single surf tourism business in Western Europe on a list, followed by the application of probability sampling, would have been too time-consuming. Judgement sampling allowed to identify sample units and enclose them to the sample directly.

4.4 Data collection

To collect data, a two-piece online survey was conducted. A mixed method to obtain quantitative and qualitative data was applied. The quantitative data mostly came from the first part of the survey. The potential development of surf tourism in Western Europe was studied. Qualitative data was obtained in the second part of the survey. The focus lay on studying the opinions and measures of surf tourism businesses towards sustainability.

4.4.1 Online survey

Reasons for the online survey

The chosen research method to collect data was an online survey. Regarding the large and distant sample, the online survey was the most appropriate research method. It allowed to collect high amounts of data in a short time. Furthermore, the survey was a great tool to reach the different members of the population. (Proctor 2005, 136-162.) In this case, the sample units were distributed around Western Europe. The online survey created accessibility. The aim of the research was to show the growth of surf tourism in Western Europe

and its opportunities for sustainability. Reliable proof is achieved when a certain portion of the population confirms the assumptions. To prove a general development in surf tourism, many members of the population need to support it. According to Proctor (2005), the fastest way to study this development was the online survey.

Further advantages of the survey were the simplicity and precision of the results. Performing the survey was easy, compared to other research methods like interviews. The questionnaire of the survey was understandable and consequently answerable for a broad sample. The results of the questionnaire were comparable, and the analysis was facilitated. (Proctor 2005, 278-321). Most of the answers created direct results, especially the quantitative data. Furthermore, the qualitative data contained finalised opinions and concepts. Therefore, no exact interpretation and profound analysis were necessary.

The questionnaire

The questionnaire followed an easy and understandable structure. It was reduced to the minimum number of questions necessary for the research. Thereby, it was simple and time-saving for the participants. (Proctor 2005, 188-218.) The processing time of the questionnaire was 15 minutes. The complete questionnaire can be found in Appendix 1. Several types of questions were used to acquire general and precise results. The question types used were

- single choice
- multiple choice
- scale questions
- short answer
- long answer.

Through a mix of several question types, general and specific insights into the development of Western European surf tourism could be compiled. Single choice questions were used to receive facts. Being able to only choose one option prevented ambiguous answers. Often these questions were yes or no questions. A participant had to choose one of the two options. The option the participant preferred was chosen. Thus, trends and general developments could be identified. Furthermore, the single choice questions provided exact data concerning questions where participants tend to make indistinct answers.

Multiple choice questions helped to identify the characteristics and behaviours of the participants. The questions related to multiple choice offered several options for the participants to choose from. In this way, topics of interest and indifference for the businesses could be

determined. In addition, the multiple-choice questions helped to analyse the activity of the various surf tourism businesses.

To deal with topics the participants have no precise answer to, scale questions were an effective method. This question type was used to gather information about tendencies and potential developments. The perceptions of the surf tourism businesses concerning the development of surf tourism were studied. Scale questions offered the person questioned a variety of answers arranged on a rising scale. The participant chose the option that was most appropriate to one. The scale questions do not require specific information but analyse the assessment of the participants. In the questionnaire, the scale question offered five options. The total left presented the minimum, and the total right the maximum. The scales were mostly used to study interests and undocumented developments.

Both, short and long answer questions were applied when individual opinions and concepts were studied. The participant could express oneself freely. No framework of the question influenced the answer. Answer questions provided qualitative data and helped to understand the potential of Western European surf tourism concerning sustainability.

4.4.2 Quantitative data

Quantitative data describes information that is countable and measurable. It is expressed in numbers and statistics. Comparison between different values is possible. The data does not have to be interpreted or categorised. Direct results are provided. (fullstory 2022.) Bhandari (2021) states that quantitative data helps to test and confirm hypotheses. That is why the first part of the survey acquired quantitative data. One goal of the research was to prove the growth of surf tourism in Western Europe. Quantitative data helped to confirm the suspected development of surf tourism through numbers and statistics. The information acquired was transferred to statistics and graphs. These illustrate the development of surf tourism as perceived by surf tourism companies and businesses.

The second part of the survey likewise provided quantitative data. The interest of surf tourism businesses in sustainability was studied. The goal was to illustrate the interest in numerical data. Additionally, to receive a better understanding of the measures and opinions of surf tourism businesses, qualitative research was conducted in the second piece of the survey.

4.4.3 Qualitative data

Qualitative data is non-numerical. It is descriptive and reflects opinions and attributes. It is expressed in words and needs to be summarised and interpreted. (QuestionPro.) According

to Bhandari (2022), information obtained in qualitative research helps to formulate hypotheses. Therefore, some qualitative data was obtained in the second part of the survey. The second aim of the research was to show how surf tourism can set a benchmark for sustainable tourism. The qualitative research provided information about the interest and measures of surf tourism regarding sustainability. This helped to evaluate the opportunities of surf tourism for sustainability and to determine how surf tourism can develop.

4.4.4 Tool used

To conduct the online survey, the Microsoft tool Google Forms was used. Google Forms is a no-cost online software allowing its users to create surveys and questionnaires. (Demarest 2021.) The software provided many question types. A separation of the document into several sections was possible. Thus, the questionnaire could be split into the two subject areas, surf tourism growth and sustainability.

The tool was used due to its user-friendliness and worldwide accessibility (Melo 2018). A well-understandable and simple questionnaire style was created with Google Forms. Thereby, it was easy and time-saving for the surf tourism businesses to fulfil the questionnaire (Melo 2018). The decision for an online tool resulted from the general development of the society to digital instead of analogue devices. Especially, in the tourism industry, the use of technology is inevitable. (TravelDailyNews 2010.) Doing the survey online made it possible to gather data within a short timeframe. Furthermore, the tool collected the results immediately in one space and the analysis is facilitated.

Google Forms provides its user with the possibility to copy a link that provides access to the survey. This feature allowed a fast distribution of it. (Melo 2018.) A cover letter containing the link was compiled. The cover letter was sent to the chosen surf tourism businesses. The participants opened the link leading directly to the questionnaire. After answering all the questions, the participants submitted the document. The results were processed immediately and saved to the database. When a participant submitted the answers, a notification was sent. In consequence, constant control was possible.

To complete a Google Form, no Google account is necessary (Demarest 2021). That is why the tool helped to get answers from the surf tourism companies whose software use is unknown. It is accessible to everyone using a smart device. It prevents any expenditures for the participants. It is easy to handle. Google Forms is a suitable tool to conduct research with a large sample size (Melo 2018). The questionnaire was simply structured and understandable. No academic and complicated formulations were used. In consequence, it fulfilled the requirements for the research.

4.4.5 Difficulties of data collection

Low response rate

A difficulty accompanying online surveys is a low response rate (Proctor 2005, 140). It is very easy to not participate and ignore the inquiry. The response rate was low. Only six of 75 contacted surf tourism businesses participated in the survey. That established a response rate of 8%. Reminders and incentives to raise the response rate were inefficacious. The low response rate was caused by the high capacity utilisation rate of the surf tourism companies during the time of research. Surf tourism companies were preoccupied with customer inquiries. Several emails were received describing a lack of time to participate in the survey.

Scarce answer

The open questions of the sustainability part of the survey required written information. Due to a lack of time or interest, some answers were inadequate. It was hard to understand the meaning of the answer. Interpretation and expertise were necessary to process the written text (Proctor 2005, 222). Participants know what is meant but do not explain it sufficiently. Outsiders of the topic do not understand it. Therefore, elaboration of the described ideas was necessary.

4.5 Data analysis

The acquired data from the questionnaire needed to be analysed. The answers were gathered in the database of Google Forms. The tool provided direct results for the quantitative data. It was processed immediately and transferred to graphical illustrations. The graphs and statistics represent the distribution of the answers of the surf tourism companies. No handling of individual answers was necessary. Google Forms processed the answers in real time. Every new set of answers was added to the existing results. The graphs were adjusted permanently. Google forms created different graphs for the analysis depending on the question type. Pie charts were created to illustrate the results of single choice questions. Bar charts for multiple choice questions and column diagrams for scale questions. The questionnaire results processed by Google Forms can be found in Appendix 2. Due to the low academic quality of the graphs and statistics provided by Google Forms, the results were processed again. The data was finalised independently with Microsoft Excel. No change in the results was caused, only the graphic representation improved.

Qualitative data resulted from the short and long answers sections. The results could not be processed by Google Forms. The tool presented the results in the same text form the

participants submitted. The qualitative data required to be further interpreted and summarised. Equal approaches were summed up to categorises. Concepts were generalised and added to certain groups. Classification followed the fields of environment, economy, or society.

4.6 Ethical considerations

According to Kelley and his colleagues (2003), several ethical considerations regarding the handling of data appear when conducting research. The surf tourism companies gave insights into business processes and customer structure. If competitors knew the information, competitive advantages could be created. Additionally, the results could hurt the image and success of a business. That is why the data was processed anonymously and confidentially. No individual companies could be identified from the results. Thereby, the protection of the private data of several businesses was assured. The survey may not affect the participants negatively. It is the responsibility of the researcher to work on the data within the purpose of the research, not own advantages, or interests. The contact details and individual data of the companies had to be deleted after the results were published. Thus, the misuse of the information was excluded. (Kelley et al. 2003.)

5   Empirical study

5.1   The development of surf tourism regarding growth

The survey examined the expected development of surf tourism by surf tourism businesses. Furthermore, developments in the number of guests in the past were studied. Combined, the acquired data helped to determine the growth of surf tourism in the future. Additionally, the general future planning of surf tourism companies was researched. The behaviour of the suppliers represents the behaviour of the market. Therefore, assumptions from the behaviour of the businesses to the development of the whole market could be drawn.

5.1.1   Characteristics of the surf tourism businesses under research

The survey tried to create a fair representation of the surf tourism companies of Western Europe. Meaning, that France, Spain, and Portugal should be represented in a similar proportion. The results of the survey showed that 50% of the participating companies were in Spain, 33,3% in Portugal and 16,7% in France. An equal distribution was not achieved. Nevertheless, the real distribution of surf tourism companies in the three countries is neither the same. Portugal offers the highest number of surf tourism suppliers, Spain the second most, and France the least. In consequence, the representation is not accurate, but sufficient to obtain reliable results.

The research showed that 83,3% of the companies are running one business unit. 16,7% manage several business units in different locations. A market of many small competitors is reflected by these numbers. There is a large supply of surf tourism. The existence of many small businesses verifies the big interest in surf tourism. If not only big international but small regional companies participate and survive in the market, high demand is detected.

Research for the average age of customers showed an equal distribution between customers of age 21-30 and 31-40. The distribution shows that the activity has many young participants. Nevertheless, the number of mature customers is equal. Thereby a great interest in the sport, independent of the age is detected. Furthermore, one may assume, that people trying surfing at young ages, remain with it. The result of studying the average age shows similarity to the global findings of surfer mean age being 34. The results of the survey could indicate the development of a growing number of young participants, caused by the growing numbers of commercial surf tourism.

In addition, the origin of the customers was studied. The selection of countries was France, Germany, Spain, Great Britain, and Portugal. These countries represent the main surf tourism participants in Western Europe. 83,3% of customers come from Germany and 16,7% from France. These results do not reflect real tourist movements in the surf tourism market. Since neither Spain nor Portugal is represented in the results, an external factor influenced the answers. In this case, it was the origin of the researcher. Since the researcher was German, a higher interest by German surf tourism businesses could have been caused. Since the businesses attract mostly customers of the country of origin, the results were influenced by a high participation of German surf tourism businesses.

5.1.2 A diverse product offer supports the development of surf tourism

To understand the attractivity of commercial surf tourism, the product offer was studied. A diverse product mix builds the core of most businesses. Surfing is the main product, but providing other activities and products is as essential. The product mix makes clear that full package adventurous trips are sold in commercial surf tourism. All companies studied offer accommodation and yoga classes. 83,3% offer surf lessons. These results show that surfing is an attractive product in combination with accommodation and other body focused activities such as Yoga. Complete holiday trips with the purpose of surfing are sold. In addition, 66,7% run a rental service for surf equipment. Thereby, the companies provide the customers with the opportunity to surf outside of the lessons. Besides, independent surfers make use of the supply. If used by externs, the rental services furthermore create income.

Next to the main product surfing, a great variety of activities is provided. 50% of the companies offer next to surfing, surf skate lessons. The lessons focus on surf specific movements and enable surf training on land. Skate lessons are an opportunity for surf tourism companies to manage bad surfing days. If no surfing is possible due to insufficient waves, the activity is brought on land. Thereby, the companies provide an alternative to surfing satisfying the customer. The missing surfing day is substituted. Bad customer experience is avoided. Next to surf skate lessons, trips to local and regional attractions are organised. An opportunity to leave the destination and discover the region and the sights is established. The quality of the whole vacation rises since the combination of accommodation, surfing, and travel to a destination creates a unique experience. The adventure of surfing is promoted by many other activities. Apart from trips, businesses offer Aerial Yoga, Stand Up Paddle, Shiatsu massage, music and surf workshops and climbing trips. The variety of activities is large.

The surf tourism businesses have a great product range. Even if a customer does not find joy in surfing, other products will satisfy one. The companies offer full package surf travels.

Bad surfing days are handled by replacing products. Travel for every person interested in adventure tourism is provided by the companies. An adventure of not only surfing but a whole range of activities is created. In consequence, commercial surf tourism is highly attractive. The wide product mix makes it appealing to almost everyone tending to adventure travel.

5.1.3 Proof of growing surf tourism in Western Europe in the past

Many new businesses were founded within the last 15 years

The foundation time of the different surf tourism businesses was studied. The following pie chart illustrates the foundation dates of surf tourism companies.
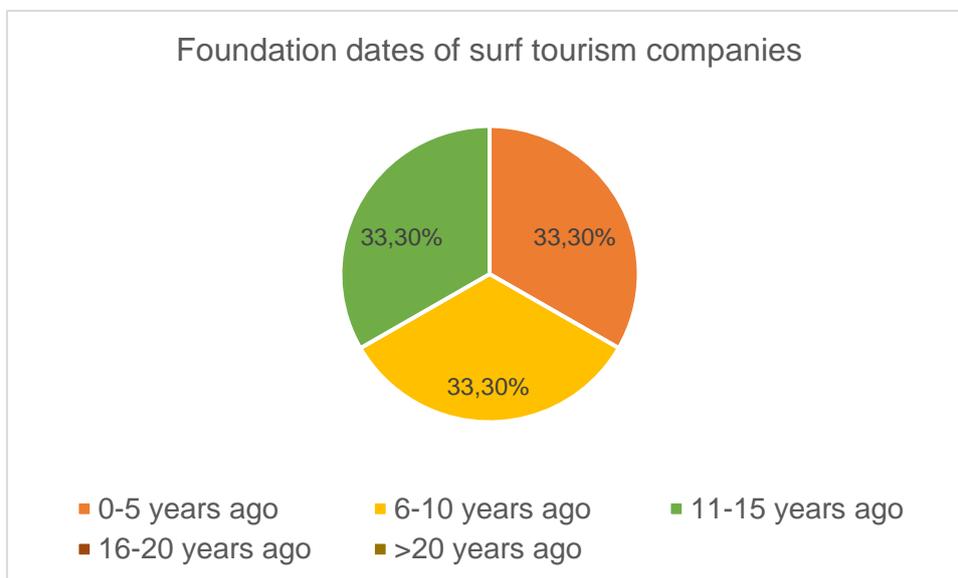
Figure 1. Foundation dates of surf tourism companies (Simon Müller 2022)

None of the businesses was older than 15 years. 33,3% were founded eleven to fifteen years ago, 33.3% six to ten years ago and 33,3% zero to five years ago. These foundation dates indicate a growing tourism market. Businesses enter a market that is promising and sustainable. The foundation of most of the surf tourism companies within the last ten years reflects a high demand. Furthermore, one third was founded in the last five years, showing a further increasing number of surf tourists is expected. The foundation dates show that surf tourism has not stopped yet and will continue growing.

Growing numbers of customers were recorded

The development of numbers of customers of the companies was researched. The given timeframe was from 2010 to 2020. Purposely, the timeframe was chosen before the Covid-19 Pandemic. Hence, the most realistic development of surf tourism could be interpreted. The effects of the pandemic were extraordinary and paralysed all of tourism. In consequence, consulting the two pandemic years 2020 and 2021 would have blurred the results. A reliable statement about the development would not have been possible. The following column diagram illustrates the perceptions of customer development by surf tourism companies from 2010 to 2020.
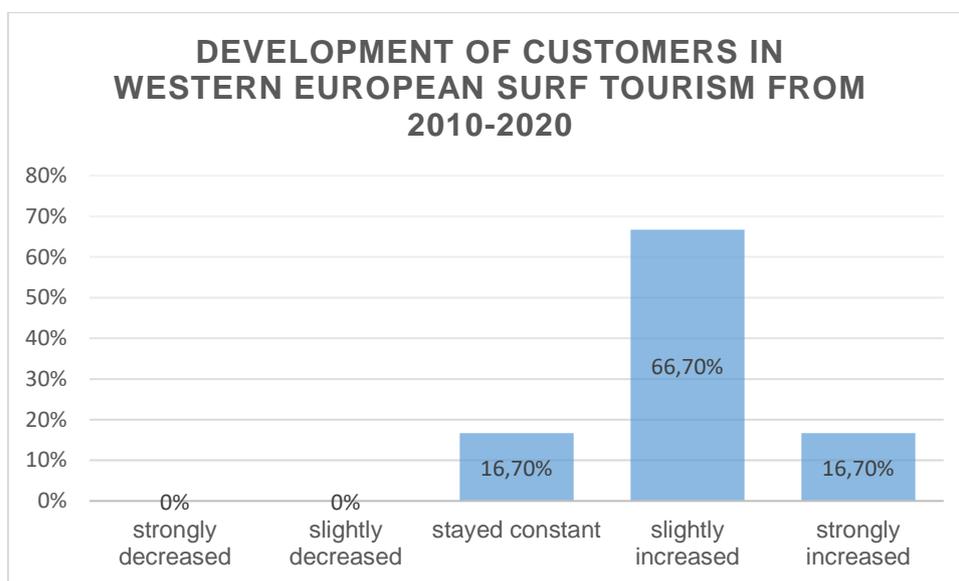

Figure 2. Development of customers in Western European surf tourism from 2010-2020 (Simon Müller 2022)

No decrease in the number of customers in surf tourism from 2010 to 2020 was recorded by commercial surf tourism companies. On the contrary, 83,4% describe a growth, from that 16,7% describe a strong increase. The numbers show that surf tourism was a growing market in the last decade.

High return rates of customers

In the theoretical framework, the high return rate of people who tried surfing was described. This return rate should be recognisable in the commercial surf tourism market. The behaviour of the customers concerning future travel choices was studied. 83,3% of surf tourism businesses stated that the customers return to the company very often. 16,7% describe an

even behaviour. But no company mentioned rare occurrences or a low probability of customer returns. Great potential for constant growth establishes through a high return rate. Old customers come back, while still new customers are acquired. The customer base becomes permanently bigger. When previous customers stay with a business and new customers are won concurrent, growth takes place.

High occupancy rates of surf tourism companies

The occupancy rate determines the utilisation of the capacities of surf tourism companies. The rate illustrates how occupied the businesses are. From this occupation rate, the interest in surf tourism is examined. When bookings are high, and the companies are fully occupied, high demand is reflected. With high demand, growth is probable. The following bar chart presents the occupancy rate at two different points in time. First, before the Covid-19 pandemic and second in 2022, the first open year for tourism after the pandemic.
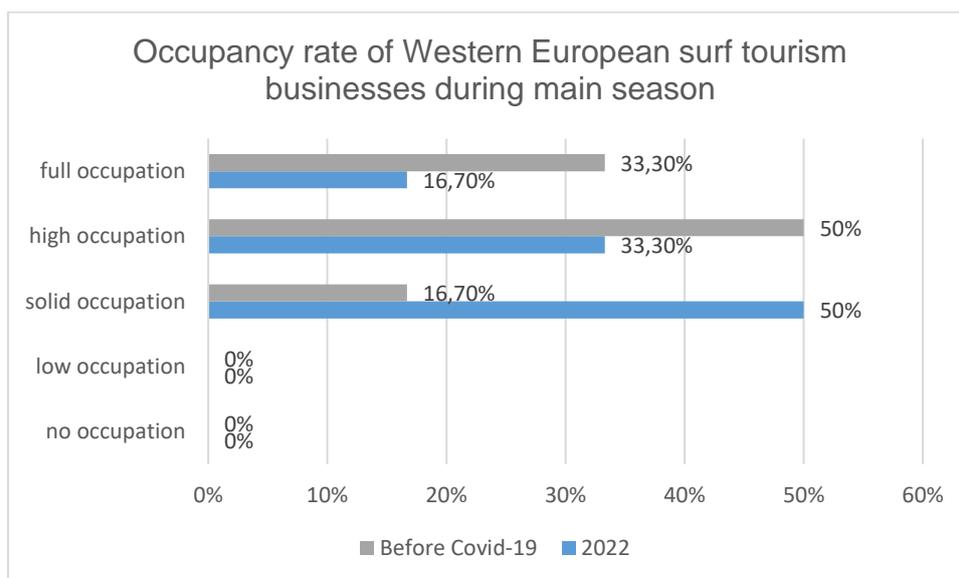

Figure 3. Occupancy rate of Western European surf tourism businesses during main season (Simon Müller 2022)

Before the Covid-19 pandemic, 83,3% had a full or high occupancy rate. A great interest in surf tourism is reflected. A full occupation for 33% of surf tourism companies illustrates an enormous demand for this tourism sector. All companies described at least solid occupation. Low or no occupation did not affect any of the companies. That proves surf tourism to be an evolving and promising industry.

In 2022, with the pandemic still present, but travel restrictions almost disbanded, the sector shows a fast recovery from the consequences of the two previous years. The survey was conducted in the preseason, implying that the planning for the year 2022 was not finished yet. Nevertheless, a quite high occupancy rate was reached already with 50% being highly or fully occupied. No negative conditions like low or no occupation were determined. 50% reported a solid occupancy rate. After two years of hard travel restrictions and a far-reaching stop of tourism, fast recovery to still less but already high occupancy rates took place. With this development, the great popularity of surf tourism is pointed out.

The fast recovery and high interest in surf tourism after the pandemic could be an indicator of the impacts of the pandemic on the travel behaviour of people. For the very reason that people were caged at home with no travel, now the interest in adventure tourism including surf tourism is supported. Surfing represents the new preferences of travellers that evolved before, but especially during the pandemic. A connection to nature, a healthy lifestyle, and social interaction and communication. In such new qualities of travelling, surfing fits perfectly. Therefore, further growth in surf tourism is expected.

5.1.4 Proof that surf tourism will grow in the future

Surf tourism businesses plan to expand

The future planning of surf tourism companies was studied. The behaviour of the businesses represents the development of the number of tourists. Businesses expand if the demand is sufficient. Supply is created when sufficient demand exists to compensate for it. In consequence, plans for expansion in the commercial surf tourism industry directly illustrate an increasing number of surf tourists.

50% of the surf tourism companies were planning to open a new business unit in another location. Additionally, 33,3% were aiming for a slight business expansion. None of the companies was trying to reduce, change or sell the current business. This information provides clear proof for the future development of surf tourism. A clear tendency to a growing number of surf tourists is determined by the expansion plannings of half of the companies. Furthermore, no intentions to reduce or sell any business confirm the promising future of the surf tourism industry. The companies hold on to the current status, showing that surf tourism is a profitable and sustainable industry. Plans to expand indicate an increase in surf tourism in the future.

The number of customers is expected to grow

The assessment of the surf tourism businesses regarding the development of the number of customers was researched. The following column diagram presents the findings.
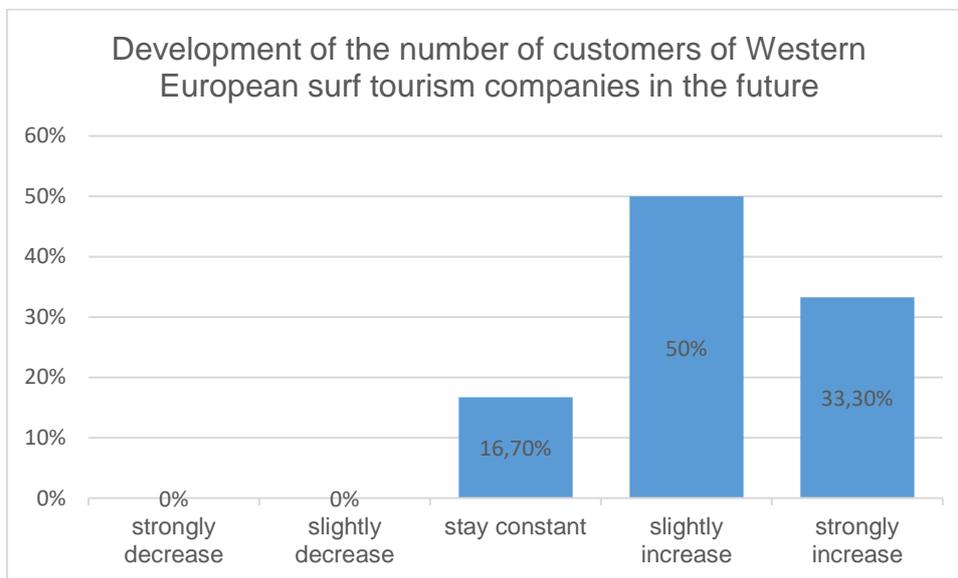

Figure 4. Development of the number of customers of Western European surf tourism companies in the future (Simon Müller 2022)

No decrease is expected by the surf tourism companies. 83,3% estimate an increase, 33,3% even a strong one. Significant growth in surf tourism is probable. These expectations accord with the expansion planning. Since growing numbers of surf tourists are estimated, the businesses try to get bigger simultaneously.

5.1.5 Considerations for the growth

The past and expected future development of surf tourism are characterised by growth. The increasing popularity of surf tourism brings many opportunities for businesses but also for destinations and the local communities. Decisive will be how the growth is managed. The growing surf tourism can be an opportunity, but also a threat. That is why the potential of surf tourism for sustainability was researched. By implementing the most sustainable practices, surf tourism will grow in the future without affecting other parties negatively.

5.2   The potential of surf tourism for sustainability

Opinions, ideas, and measures of surf tourism businesses towards sustainability were ex-amined. The general interest in sustainability was researched. In addition, the three pillars of sustainability environment, economy and society were studied individually. The results helped to show the potential of surf tourism to be sustainable. Furthermore, opportunities for surf tourism to set a benchmark for sustainable adventure tourism were elaborated.

5.2.1   Significant interest in sustainability

To understand how big the interest in sustainability in surf tourism is, the respect of surf tourism businesses and customers towards it was researched. This bar chart illustrates how customers and companies value the importance of sustainability.
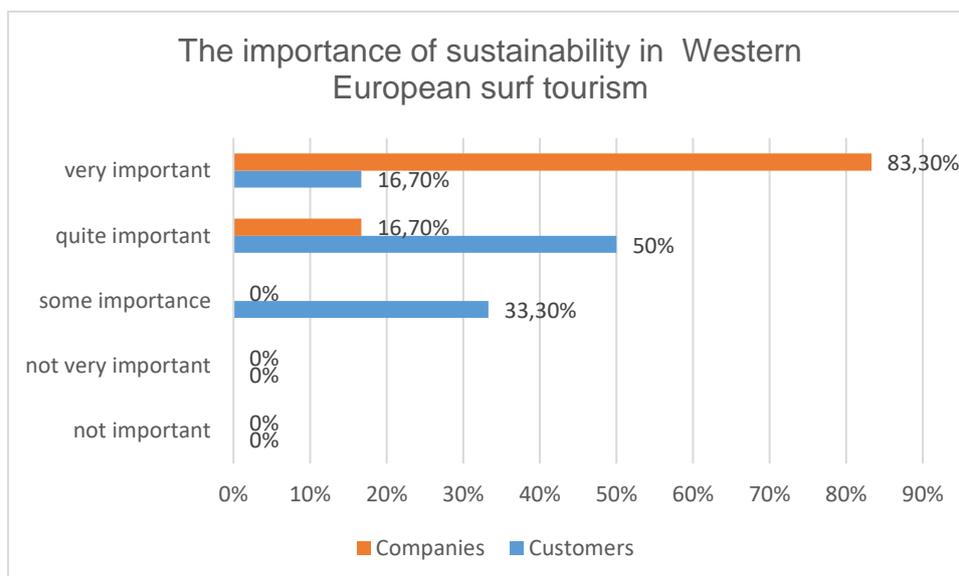

Figure 5. The importance of sustainability in Western European surf tourism (Simon Müller 2022)

Overall interest in sustainability in surf tourism was determined. All companies and custom-ers value at least some importance to sustainability. A significant difference was detected between companies and customers. The importance of sustainability is rated higher by companies than customers. Most companies considered sustainability as very important while customers mostly described it as quite important.

The results show that the companies which are the drivers of commercial surf tourism already value sustainability very high. The companies have the responsibility to educate the customers who do not display the same values. A good starting point is established with high interest and awareness towards sustainability. From this point, sustainable future development can be achieved.

5.2.2 Implementation of eco-friendly measures

The implementation of eco-friendly measures by the surf tourism companies was studied. 100% of the businesses confirmed having sustainable measures implemented. Thereby, general activity in environmentalism was detected. The measures of the companies were classified into four main categories, being

- recycling
- energy and water use
- food supply
- active environmentalism.

Recycling

All companies described several actions for recycling and reducing plastic waste. When purchasing, the focus lies on minimising the amount of plastic. Within 33,3% of the companies, lunch boxes and recyclable plastic boxes were used. Thus, single-use plastic and the use of aluminium foil were reduced. 16,7% of the companies used recyclable surf materials like balsa wood surfboards, organic surf wax, and recyclable leashes. Furthermore, upcycling processes were described to produce furniture and materials. An example of upcycling is furniture made from industrial pallets. A strict waste separation was described by 33,3%. All businesses showed a great interest in several recycling measures. A great basis for improvement in environmental sustainability exists.

Energy and water use

50% of the companies try to minimise the ecological footprint of the facilities in use. Green electricity as the main power source stood in the focus. Either produced by own solar panels or green energy suppliers. The use of gas and fossil material is reduced significantly. Furthermore, water saving systems and sustainable water cycles were implemented by 33,3% of the companies. A general interest in sustainable water use was determined.

Food supply

33,3% reported that the food supply of the businesses is sourced locally. Besides, an open and transparent food supply was described. Hence the customers know where the food comes from. Using the local food supply does on the one hand reduce the greenhouse gas emissions of transport and on the other hand, support the local economy.

Active environmentalism

33,3% of the businesses participated in beach clean-ups. 16,7% supported environmental organisations. The beach clean-ups and support of organisations establish a great way to expand the environmental support over the own business. One company stated that you should leave the beach better than you found it. This makes a great statement for all surf tourists.

5.2.3 Future planning to become eco-friendlier

Next to the existing sustainable measures of the companies, the future planning was studied. The pie chart below expresses the existence of sustainable future planning in surf tourism businesses.

Existence of future planning for environmentalism in Western European surf tourism businesses
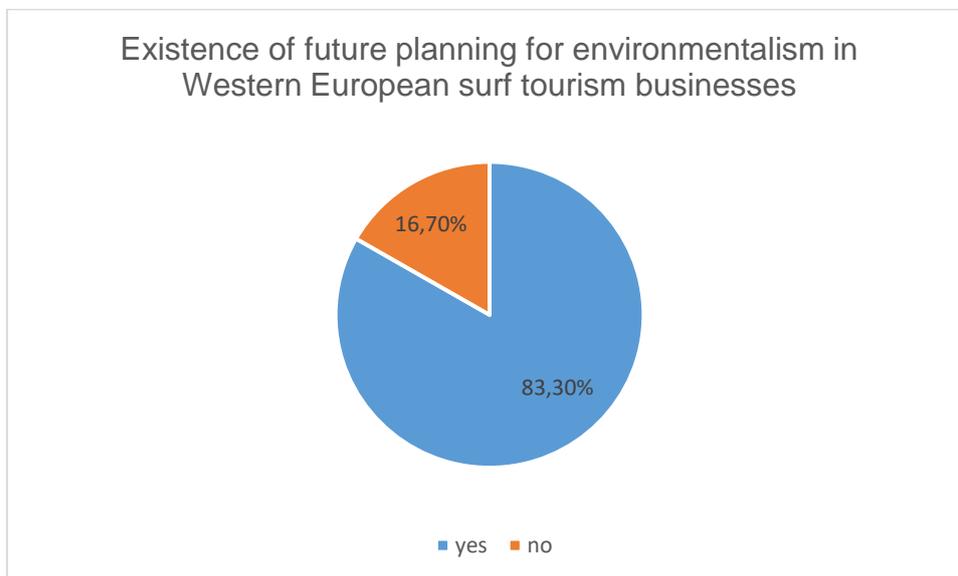
16,70%

83,30%

■ yes ■ no

Figure 6. Existence of future planning for environmentalism in Western European surf tourism businesses (Simon Müller 2022)

83,3% of the companies have plannings to become eco-friendlier. The individual plannings although are different. The presented future concepts were

- grey water recycling
- increased offer of vegetarian food
- incentives to use green means of transport
- hiring a sustainability manager
- use of electronic vehicles.

The plannings of the businesses distinguish from each other. But similar goals are followed by all. To reduce greenhouse gas emissions and to lower the environmental impact. The idea to hire a sustainability manager reflects a great interest in sustainability. A true desire for improvement is shown.

5.2.4 Interest in sustainable surf equipment

Surf equipment is one of the biggest threats of surf tourism to the environment. Most of the equipment cannot be recycled and contains harmful materials. Industrial mass-produced boards lead the commercial surf tourism market. To identify the sustainability of surf equipment in the commercial surf tourism industry, the origin of the surfboards in use was studied. The following ring diagram illustrates the distribution.
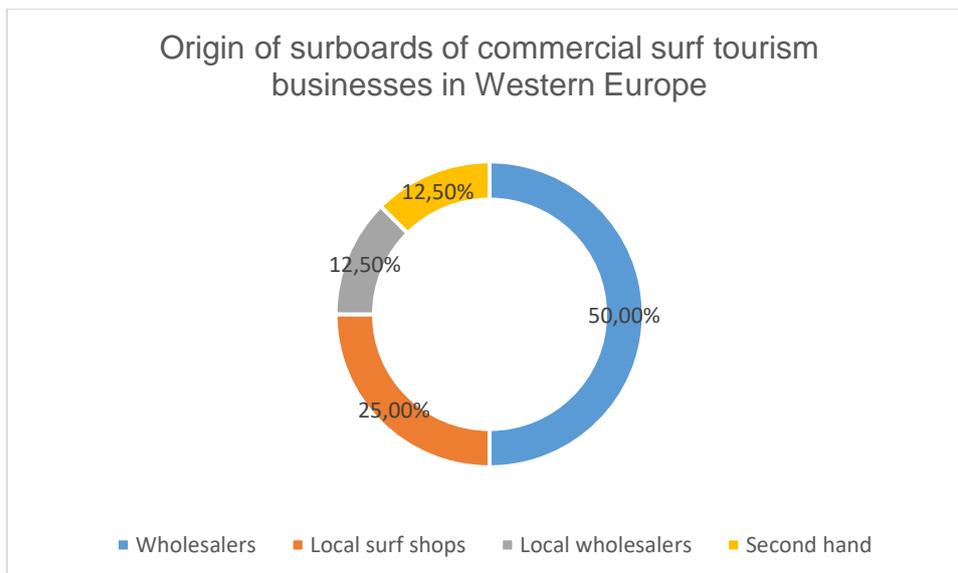

Figure 7. Origin of surfboards of commercial surf tourism businesses in Western Europe (Simon Müller 2022)

Half of the commercial surf tourism businesses purchased from wholesalers. Wholesalers mostly sell industrially produced surfboards with a high ecological impact. Furthermore, the money flows only to the big national or international companies. No contribution to the local economy is provided. The other half purchased surfboards at local surf shops, local wholesalers or second hand. When using local surf shops and local wholesalers, the local economy profits from the purchase. Still, the boards are mostly ecological unsustainable. The eco-friendliest acquisition of surfboards is by second hand.

The origin of the surfboards shows that the surf tourism industry must change a lot. So far, the equipment in use still harms the environment and the contribution to local communities is low. The development of sustainable alternatives to the previous surf equipment is growing. The surf tourism companies need to adapt to the new opportunities. To understand the potential of sustainable surf equipment in commercial surf tourism, the interest in it was studied. The column diagram below reflects the interest of surf tourism companies in sustainable surf equipment.
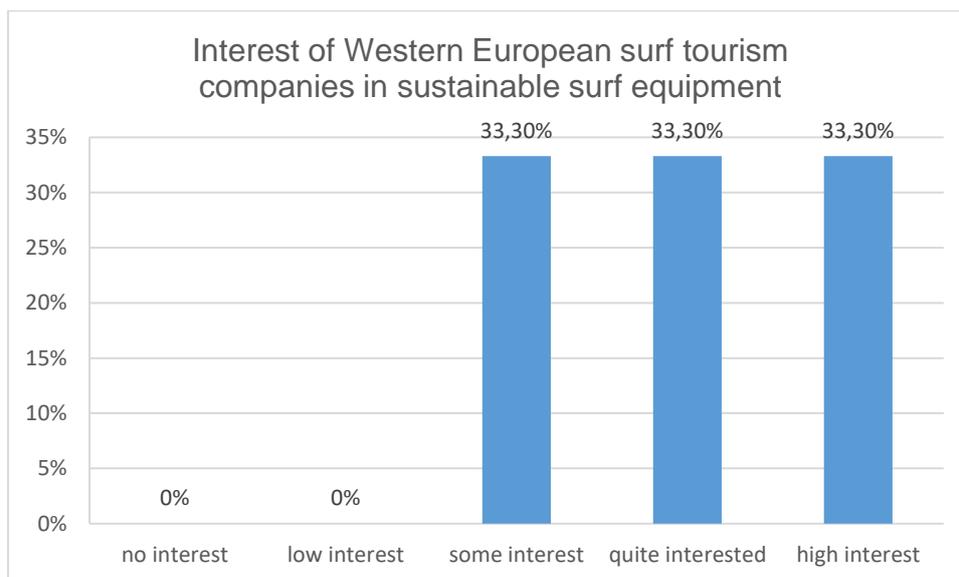

Figure 8. Interest of Western European surf tourism companies in sustainable surf equipment (Simon Müller 2022)

Between the current use of and the interest in sustainable surf equipment a contrary exists. From there two possibilities were suspected. Either the market for sustainable surf equipment is too small to feed commercial surf tourism businesses, or the costs for the equipment are too high to afford. Independent of the circumstances, the market for sustainable surf

equipment must be expanded. The interest in it exists. If accessible and affordable surf tourism companies will use it. To become sustainable in the future, a change in the use of surf equipment is crucial.

5.2.5 Economic support of local community and businesses

Sustainability is more than environmentalism. Therefore, the contribution of commercial surf tourism to the economy of the destinations was researched. Economic exploitation in surf tourism appears when foreign companies use the resources of a destination but do not benefit it. The foreign surf tourism companies generate profit, the local community receives destruction. That is why the cooperation of surf tourism businesses with local businesses and the community was studied, as shown in the following column diagram.
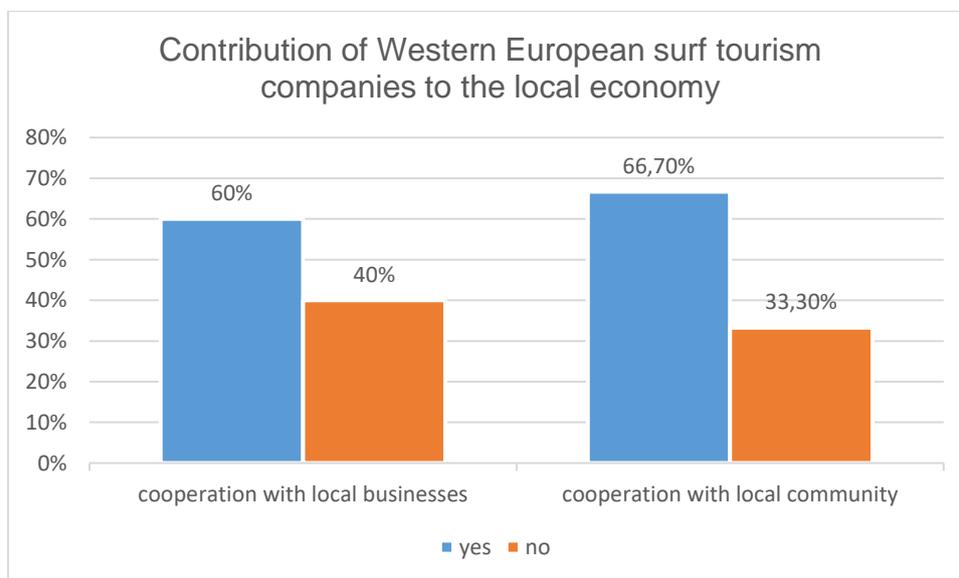

Figure 9. Contribution of Western European surf tourism companies to the local economy (Simon Müller 2022)

More than half of the businesses were working together with local businesses and the community. Given examples of cooperation were associations with local surf schools. The companies offer the main product of surf travel. Local surf schools provide surf courses. Thereby, both foreign companies and local surf schools benefit from each other. Other contributions to the local economy were the use of local organic food. Thus, local farmers and shops are supported economically. Other businesses described cooperation with bars and restaurants. The local gastronomy benefits from the surf tourists. The companies have fixed

points of interest for leisure time activities. Small local restaurants, instead of touristic large kitchens are supported.

Besides, surf tourism offers many jobs for the local inhabitants. The research found that 57,1% of surf coaches employed by surf tourism companies were local. Further 14,3% were regional. In consequence, surf tourism provides vacancies for local people. Where surf destinations are, many inhabitants surf. Through the surf tourism companies, an opportunity for economic stability arises for locals.

5.2.6   Prevention of localism

Regarding the social impacts of surf tourism on host communities, the development of localism established the biggest problem. Surf tourism companies have the responsibility to educate the customers about the right behaviour while surfing. That is why the research studied the importance of education in surf etiquette and the management of surf spots by surf tourism companies. 88,3% of the surf tourism companies evaluated sufficient education and instruction about surf etiquette and priority rules as very important. The other 16,7% assigned some importance to it. The results showed that the companies are aware of localism and try to prevent it. A first step to solving the social problem of localism was done. Nevertheless, beginner surfers do many mistakes. Not maintaining the rules is caused by mistakes and inattentiveness. Therefore, another opportunity exists, to regulate the impact of localism. Namely, by regulating the surf spots. The pie chart below shows the regulation of surf spots in Western Europe as described by the surf tourism businesses.

Use of surf spots by commercial surf tourism businesses and free surfers in Western Europe

16,70%

83,30%

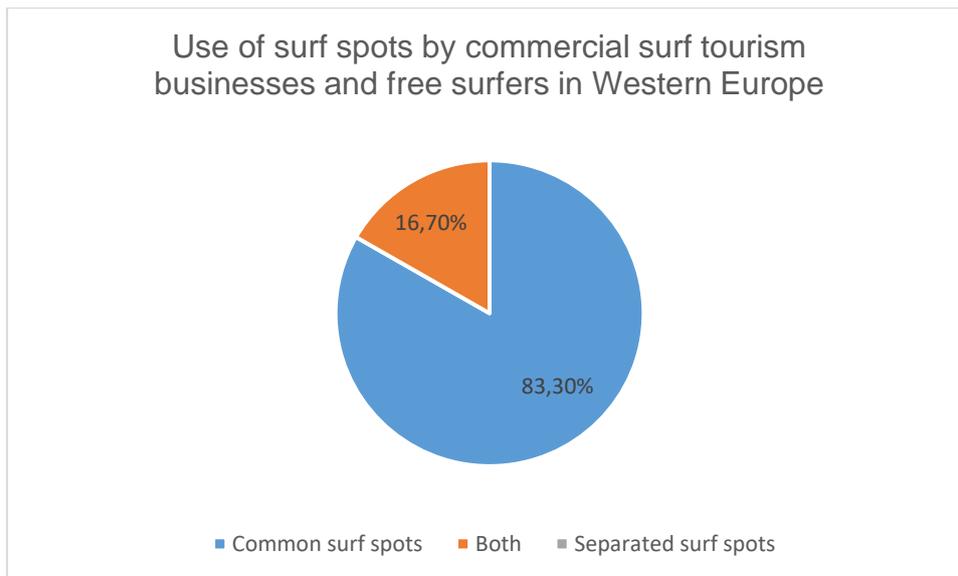■ Common surf spots   ■ Both   ■ Separated surf spots

Figure 10. Use of surf spots by commercial surf tourism businesses and free surfers in Western Europe (Simon Müller 2022)

With 83,3% most of the surf spots are used in common by commercial surf tourism businesses and free surfers. No separated surf spots for both parties exist at all. With rising numbers in surf tourism, a foundation for conflict is established. The number of surfers in the water will rise further. Surf tourism businesses should try to establish surf spots only used for beginners. If beginners mix up with experienced locals, conflicts will arise.

Surf tourism businesses should focus on the low-level surf spots and let the good ones left to the advanced surfers. A good education will help to fight localism, but in the long-term, a permanent solution should be designed. By introducing an elaborated regulation system for surf spots, the constant growth of surf tourism, without lowering its quality could be guaranteed.

5.2.7   Considerations for sustainable surf tourism in Western Europe

Significant interest and development toward sustainability in Western European surf tourism could be identified. Still weaknesses and areas of improvement were determined. A general desire for sustainability was shown. Now the surf tourism companies must extend the sustainable measures further and make use of the rising offer of sustainable alternatives. Furthermore, a strong integration in the local economy and society needs to be fostered. The results showed that Western European surf tourism has made crucial steps towards sustainability, but further improvement, especially in socio-cultural terms is necessary.

The surf tourism companies pursued concepts to reduce the impact of the customers on the environment. Incentives to foster the customers to use green mobility, separate trash and reuse water are foundation stones to achieve improved sustainability. The businesses lead the surf tourists in the right direction and improve their impact without them knowing. Thereby, a general, and not individual sustainable development is supported for the future. The results showed that the companies fulfil their responsibility in influencing the behaviour of the customers in a sustainable direction.

6   Conclusion

6.1   Summary

Western European surf tourism is a growing sector of adventure tourism with the prerequisites to become a benchmark for sustainable tourism. It is expected to keep growing in the future. Hence, its importance for the adventure tourism industry will grow evenly. To prevent an unhealthy increase that affects the environment, local economy, and society negatively, surf tourism needs to develop sustainably. The existence and appreciation of sustainable developments are high in the surf tourism industry. Overall great interest in the implementation of sustainability within the business concepts could be recognised.

The driving factors for surf tourism will not lose importance, but rather be reinforced. The availability and accessibility of surfing increase with the growing supply of surf tourism. The technology and surf product industry will extend further and generate an even bigger offer of surf support and equipment. The health benefits of the activity will draw even more attention to surfing than ever before. The pandemic intensified the significance of a healthy and active lifestyle. Many people will discover the sport due to its rising popularity and probably stick with it. Surf tourism is determined to grow. The niche form of activity tourism represents the most important values of our modern society. A deep connection to nature, a healthy lifestyle, and a strong and diverse social community.

A clear tendency to growth was determined by the survey. Rising numbers of surf tourists, expansion planning of surf tourism companies and a fast recovery of the surf tourism industry from the effects of the Covid-19 pandemic, verify an increase in surf tourism. The attractivity of surf tourism is rising and will push its development further. Surfing establishes a form of adventure tourism with many repeating customers. Thereby a sustainable foundation for further growth is created.

To enable the future growth of surf tourism without harming the environment, economy, and society, the development needs to follow the three pillars of sustainability. Thereby, a long-term growth that benefits surf tourism companies, local economies and local society and culture can be achieved. Western Europe establishes a surfer paradise due to its varied offer and many high-quality surf breaks. The settlement of international surf competitions rose the popularity of surfing in Europe. Commercial surf tourism supported a rapid growth of the sector. Since 1950 the activity expanded constantly and today an annual increase of 12-16% is recorded. A large number of newly established surf tourism companies verify this development. Surf tourism has become a highly attractive industry in Western Europe. Long-term sustainable management is necessary to guarantee constant and contributing

growth. The survey confirmed that sustainability has a great appearance in surf tourism. Interest and actions for more sustainable development were detected. In consequence, the sector can set a benchmark for sustainable adventure tourism, when implementing the existing possibilities.

Surf tourism companies have already established several concepts to support the environment, economy, and society. The potential for sustainability in the Western European surf tourism industry is big. Various ideas and applications could be determined. An overall interest of surf tourism businesses to lower their economic impact and support the destinations was determined. With a high-quality infrastructure, a certain food supply and a large touristic offer, surf tourism can make use of progressive technologies and sustainable alternatives. The opportunity to become sustainable is big but the surf tourism companies need to use it.

6.2 Discussion

The rising importance of sustainability supports the development of sustainable concepts and measures. It is the responsibility of the surf tourism businesses and surf tourists to make use of it. To enable sustainable surf tourism, the companies need to implement the latest and most effective possibilities to strengthen environmental protection, economic contribution, and socio-cultural support. With a pure profit orientation, the growing surf tourism market will destroy the environment, exploit local economies, and suppress local culture and society. The gap between positive and negative development is small. Surf tourism must adapt to the latest developments permanently. Long-term plannings that include the use of sustainable concepts and destination development are crucial. The survey showed that the opportunity is big, now it is in the hands of the surf tourism companies and surfers to take it.

Western European surf tourism can become a benchmark for sustainable adventure tourism when it respects the following guidelines:

1. The overall meaning of sustainability needs to be understood. The fundamental understanding of the impact on the environment, economy and society guarantees efficient and adequate long-term planning.

2. The future growth of surf tourism must be controlled and limited. Surf spots have a limited capacity. The resources need to be used appropriately to prevent over tourism and negative impacts on the destination.

3. The rising offer of sustainable alternatives to surf equipment, transportation, and maintenance needs to be used. Surf tourism can achieve better sustainability by implementing the latest technologies and solutions for better surf travel.

4. The customers of surf tourism companies need to be educated about the environment and surfing. Sustainable development can be achieved when surf tourists follow the standards of surfing and sustainability.

5. Surf tourism needs to integrate into local communities and support local societies. Active participation in the development of the destination needs to be achieved.

Sustainable developments are accompanied by high costs. Thereby, one of the biggest obstacles to sustainable surf tourism is created. Most green alternatives for surf equipment, energy, food supply and transport exceed the prices of the harmful products. In consequence, the use of such alternatives is perplexed. If the prices for sustainable surf tourism are much higher than for popular commercial surf tourism, sustainable development will be slowed down. The market for sustainable alternatives needs to improve further to become transferrable for many customers. This difficulty could be recognised in the survey. The surf tourism companies expressed interest in sustainable surf equipment, although its use was low.

The future development of surf tourism in coastal destinations in Western Europe must be monitored. From the development of the next years, a statement about its sustainability can be made. High opportunities for sustainable development could be identified, but the realisation needs to be controlled. That is why further research on this topic is necessary.

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Appendix 1. Questionnaire

The future development of surf tourism in coastal de ☆ | Senden

Fragen Antworten 6 Einstellungen

Abschnitt 1 von 4

The future development of surf tourism in coastal destinations in Western Europe

This questionnaire examines the development of surf tourism concerning its growth and sustainability in coastal destinations in Western Europe.
The first part of the survey will focus on information about your surf business and your customers. The second part will concentrate on your opinions and ideas in regard of sustainable surf tourism.
The results will help to understand the current development of the surf tourism market in Western Europe.
Besides, the integration of, and interest in sustainability, in surf tourism companies will be studied.

Nach Abschnitt 1 Weiter zum nächsten Abschnitt

Abschnitt 2 von 4

The development of surf tourism in Western Europe

Beschreibung (optional)

2. Where is your business located?

○ France

○ Spain

○ Portugal

3. Do you manage several business units in different locations?

○ Yes

○ No

4. What products does your surf company offer?

☐ Surf lessons

☐ Accommodation

☐ Rental service for surf equipment

☐ Yoga classes

☐ Surf skate lessons

☐ Trips to local and regional attractions

☐ Weitere…

5. When was the company founded?

○ 0-5 years ago

○ 6-10 years ago

○ 11-15 years ago

○ 16-20 years ago

○ >20 years ago

6. What is the average age of your customers?

○ 15-20

○ 21-30

○ 31-40

○ 41-50

○ >50

7. Where do most of your customer come from?

○ France

○ Germany

○ Spain

○ Great Britain

○ Portugal

○ Weitere…

8. What mean of transportation do most of your customers use to reach your company?

○ Car

○ Bus

○ Train

○ Airplane

○ Ship

9. How has the number of customers developed between 2010-2020? (before Covid-19)

	1	2	3	4	5	
Strongly decreased	○	○	○	○	○	Strongly increased

11. How fully are you booked for this years main season?

	1	2	3	4	5	
not booked at all	○	○	○	○	○	overbooked

12. How fully were you booked before the Covid-19 pandemic during your main season?

	1	2	3	4	5	
not booked at all	○	○	○	○	○	overbooked

13. Do customers come back to you after they have had a vacation with your company?

	1	2	3	4	5	
very rare	○	○	○	○	○	very often

14. What are your future plans for your business?

○ Expand strongly

○ Expand slightly

○ Keep current

○ Reduce slightly

○ Reduce strongly

○ Sell

○ Weitere…

15. Are you planning to open a new business unit in a new location?

○ Yes

○ No

16. How do think the number of customers will develop in the future?

	1	2	3	4	5	
strongly decrease	○	○	○	○	○	strongly increase

Nach Abschnitt 2   Weiter zum nächsten Abschnitt ▾

Abschnitt 3 von 4

Sustainability in surf tourism businesses

Beschreibung (optional)

1. How important is sustainability to your clients?

	1	2	3	4	5	
not important at all	○	○	○	○	○	very important

2. What is your opinion on sustainability?

	1	2	3	4	5	
not important at all	○	○	○	○	○	very important

3. Do you have any sustainable measures implemented in your business?

○ Yes

○ No

If yes, please describe shortly some sustainable measures you have introduced in your company.

Langantwort-Text

5. Do you have any plans and ideas to make your business more sustainable in the future?

○ Yes

○ No

If yes, how do these plans and ideas look like?

Langantwort-Text

6. Where do you get your surf equipment from?

○ Wholesalers

○ Local surf shops

○ Own production

○ Weitere…

7. How interested are you in implementing sustainable surf equipment in your business?

	1	2	3	4	5	
not interested at all	○	○	○	○	○	very interested

8. Do you have cooperations with local businesses?

○ Yes

○ No

If yes, which cooperations with local businesses do you have?

Langantwort-Text

9. Where are your surf instructors from?

○ Local

○ Regional

○ National

○ International

10. How are the surf spots in your region managed?

For example in Fuerteventura some surf spots are limited to free surfers. No surf schools are allowed there.

○ Common use of surf schools and free surfers

○ Separated use of surf schools and free surfers

○ Both

11. How important to you is the instruction of your customers about surf etiquette and priority rules?

	1	2	3	4	5	
not important at all	○	○	○	○	○	very important

12. Do you work together with local communities?

○ Yes

○ No

If yes, please describe how?

Langantwort-Text

Nach Abschnitt 3   Weiter zum nächsten Abschnitt

Abschnitt 4 von 4

Thank you for your participation!

With your answers you provided important data to the study of the future development of surf tourism in coastal destinations in Western Europe.

Appendix 2. Questionnaire results by Google Forms
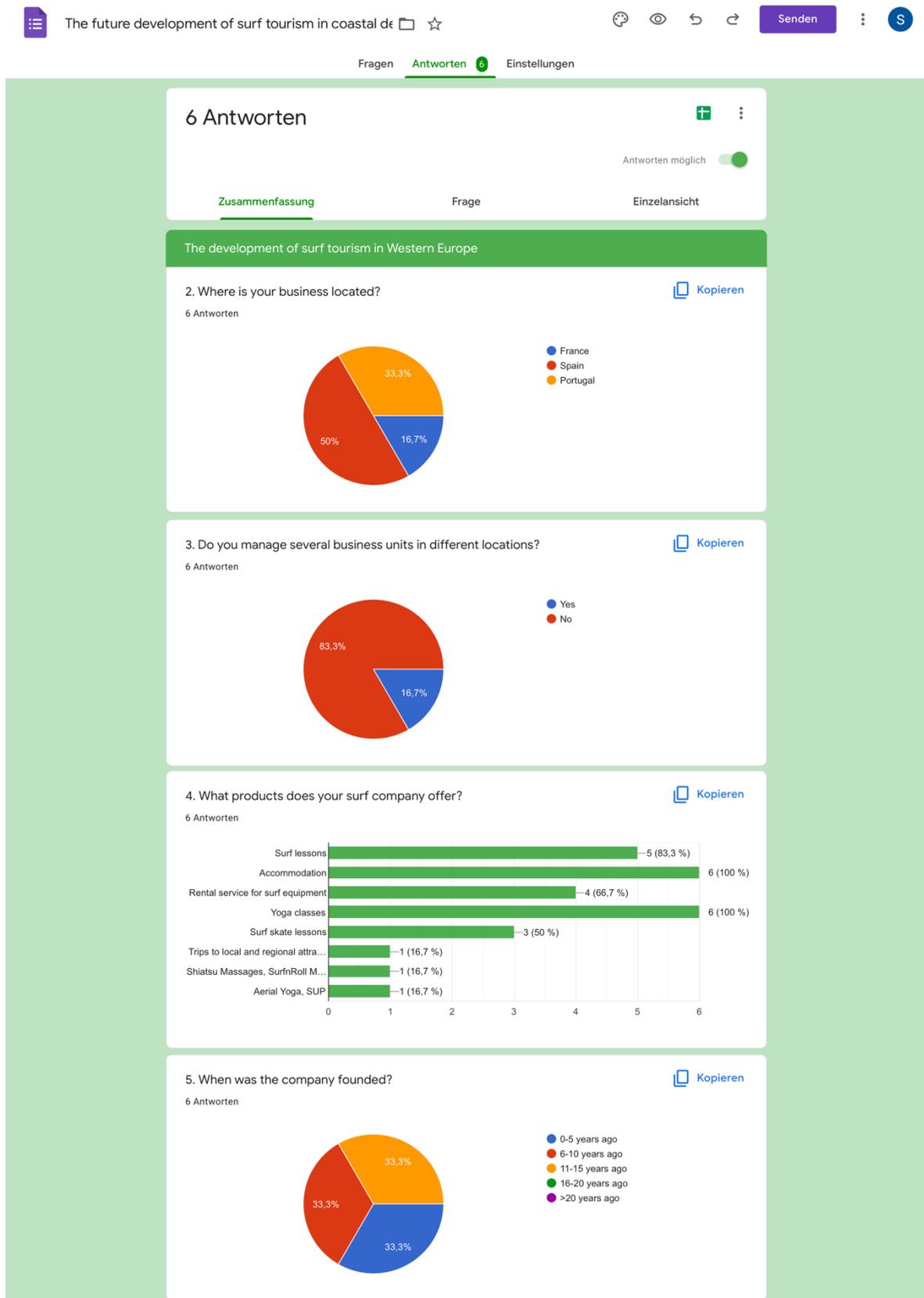
6. What is the average age of your customers?
6 Antworten
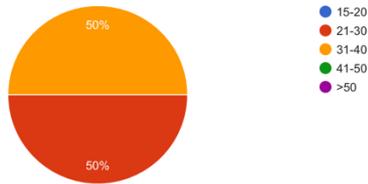
- 15-20
- 21-30
- 31-40
- 41-50
- >50

50%
50%

7. Where do most of your customer come from?
6 Antworten

- France
- Germany
- Spain
- Great Britain
- Portugal

83,3%
16,7%

8. What mean of transportation do most of your customers use to reach your company?
6 Antworten

- Car
- Bus
- Train
- Airplane
- Ship

50%
16,7%
33,3%

9. How has the number of customers developed between 2010-2020? (before Covid-19)
6 Antworten

0 (0 %) 0 (0 %) 1 (16,7 %) 4 (66,7 %) 1 (16,7 %)
1 2 3 4 5

11. How fully are you booked for this years main season?
6 Antworten

0 (0 %) 0 (0 %) 3 (50 %) 2 (33,3 %) 1 (16,7 %)
1 2 3 4 5

12. How fully were you booked before the Covid-19 pandemic during your main season?

Kopieren

6 Antworten

- 1: 0 (0 %)
- 2: 0 (0 %)
- 3: 1 (16,7 %)
- 4: 3 (50 %)
- 5: 2 (33,3 %)
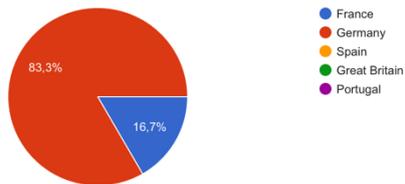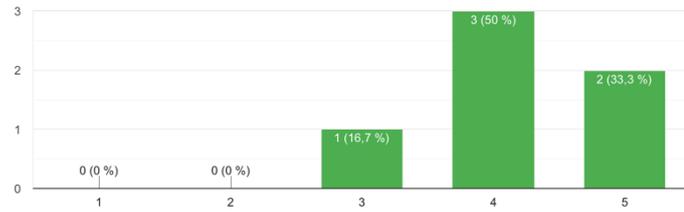
13. Do customers come back to you after they have had a vacation with your company?

Kopieren

6 Antworten

- 1: 0 (0 %)
- 2: 0 (0 %)
- 3: 1 (16,7 %)
- 4: 0 (0 %)
- 5: 5 (83,3 %)
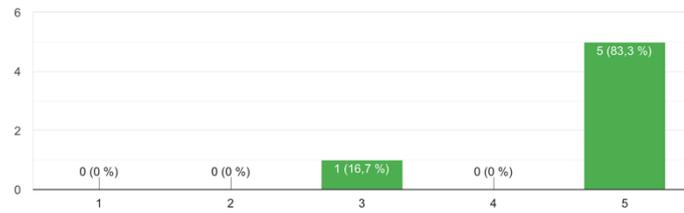
14. What are your future plans for your business?

Kopieren

6 Antworten

- Expand strongly
- Expand slightly
- Keep current
- Reduce slightly
- Reduce strongly
- Sell

66,7%
33,3%
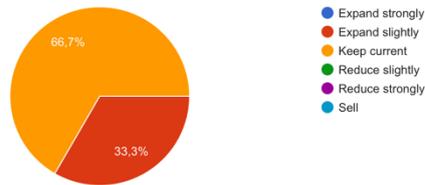
15. Are you planning to open a new business unit in a new location?

Kopieren

6 Antworten

- Yes
- No

50%
50%
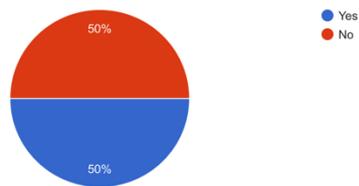
16. How do think the number of customers will develop in the future?

Kopieren

6 Antworten

- 1: 0 (0 %)
- 2: 0 (0 %)
- 3: 1 (16,7 %)
- 4: 3 (50 %)
- 5: 2 (33,3 %)

Sustainability in surf tourism businesses

1. How important is sustainability to your clients?
6 Antworten

2. What is your opinion on sustainability?
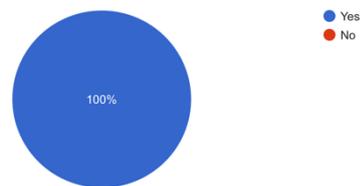6 Antworten

3. Do you have any sustainable measures implemented in your business?
6 Antworten

If yes, please describe shortly some sustainable measures you have introduced in your company.
6 Antworten

Mülltrennung / Einkäufe mit mgl wenig Plastik / Recycable water bottles / einkäufe offen + lokal

Central heating and hot water via solar panels, solar lamps, water savings.

Recycled Leashes, Balsa-Wood surfboards, organic surfwax, beach cleanups; lunchboxes instead of cling wrap; Support of environmental organizations (surfrider foundation, etc.)

Many about the water and reciclyng

Sourcing food locally, avoiding single use plastic, recycling, up-cycling materials/ furniture.

We stopped the use of gas and we are use only electric, changed electric supplier to a greener one, Recycling is mandatory, we use cleaning products for all the equipments that are ecologically friendly, we often promote beach clean ups with our customers "leave the beach better than you found it".

5. Do you have any plans and ideas to make your business more sustainable in the future?
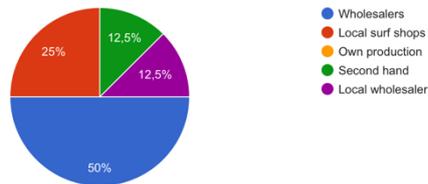6 Antworten

If yes, how do these plans and ideas look like?

5 Antworten

Grey water recycling

Bonus discounts for guests arriving by train instead of plane; more vegetarian food

Water natural sistem

Hiring a sustainability manager, applying for B-Corp or similar, joining sustainability groups.

Electric vehicles, Solar panels.
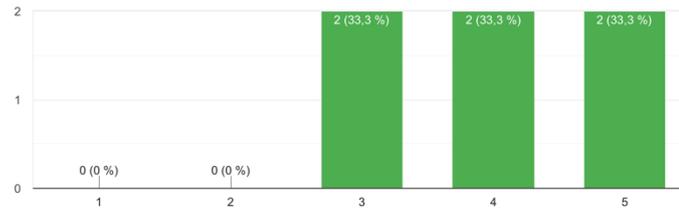
6. Where do you get your surf equipment from?

6 Antworten

Kopieren

- Wholesalers
- Local surf shops
- Own production
- Second hand
- Local wholesaler

12,5%
25%
12,5%
50%

7. How interested are you in implementing sustainable surf equipment in your business?

6 Antworten

Kopieren

	1	2	3	4	5
	0 (0 %)	0 (0 %)	2 (33,3 %)	2 (33,3 %)	2 (33,3 %)

8. Do you have cooperations with local businesses?

5 Antworten

Kopieren

- Yes
- No

40%
60%
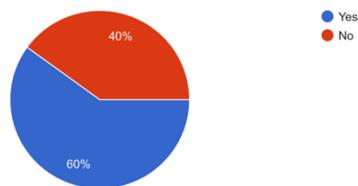
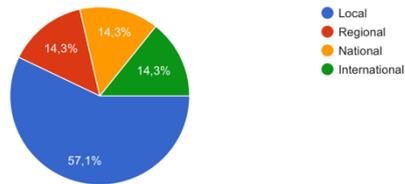If yes, which cooperations with local businesses do you have?

4 Antworten

Local organic food

I dont understand the question.:Which cooperations? Well, economic cooperations relevant to our business...

Many and differents

Surf school, bars/restaurants
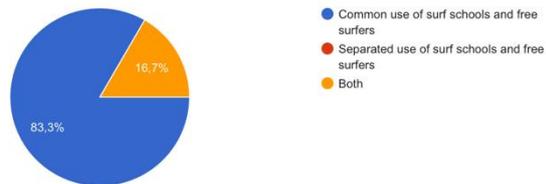
9. Where are your surf instructors from?

6 Antworten

- Local
- Regional
- National
- International

14,3% Regional
14,3% National
14,3% International
57,1% Local

10. How are the surf spots in your region managed?

6 Antworten

- Common use of surf schools and free surfers
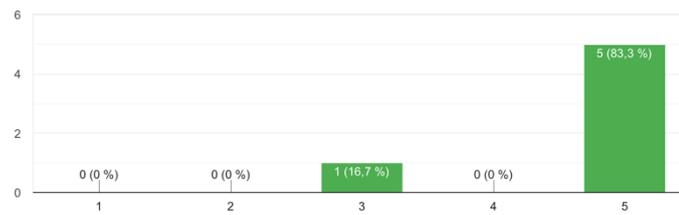- Separated use of surf schools and free surfers
- Both

83,3%
16,7%

11. How important to you is the instruction of your customers about surf etiquette and priority rules?

6 Antworten

1	0 (0 %)
2	0 (0 %)
3	1 (16,7 %)
4	0 (0 %)
5	5 (83,3 %)

12. Do you work together with local communities?

6 Antworten

- Yes
- No

66,7%
33,3%
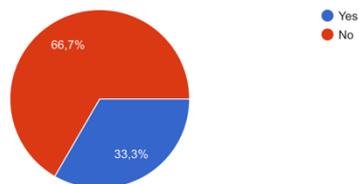
If yes, please describe how?

2 Antworten

together with other local surfschools we form an association of surfschools

In different ways, depending the subject

Thank you for your participation!