Issues of Conflict Management in a Context of Increasing Surf Tourism

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Surf tourism is an increasingly popular niche in tourism that sparks economic development in many coastal regions around the world. Surfers make use of surf breaks which can be considered natural resources that thus experience issues of carrying capacity. Although no formal management system is in place (and desired), surfers utilize informal management systems such as localism and surf etiquette in an attempt to tune behaviors. A multi-method approach is used to explore surf tourism and its effect on the local population of Nouvelle-Aquitaine, an area in which surf tourism is highly popular but little researched. Results indicate that crowding issues are widespread. Local surfers see their surfing experience and enjoyment affected, especially during high season, although the importance of surf tourism for the local economy is also understood. Education with regards to surf etiquette, but also regarding communication and mutual respect, can improve the situation, which is necessary as surfing is only expected to grow further in the future.

Keywords: surf tourism, crowding, surf break management, surf etiquette, localism

Through the 20th century, an important part of cultural development in the Western world consisted of the emergence of board sports such as surfing and snowboarding. Because these sports often require participants to travel to areas where conditions favor practicing them, particular sport tourism destinations started to develop. More recently, both the accessibility of destinations and the popularization of surfing through popular (online) media facilitated the growth of surf tourism. O'Brien and Eddie (2013 in: O'Brien & Ponting, 2018) pinpoint the number of surfers at 35 million while "analysts promise an estimated of 60 million community members by 2018" (Lipchain, 2018, n.p.). Surfers choose their surfing destinations based on where the quality of the surf is high. Quality is depending on the shape of the wave, which is determined by, for instance, consistency and size of the waves, wave period, and local wind conditions. Other more general destination assets, such as weather, scenery, and quality of tourism facilities, influence the success of surf destinations as well. The impact can be tremendous, as previously unknown places can develop into important tourism destinations, when surfing takes up an important role in the community's economy. Surf schools, surf shops, targeted surf accommodation, and surf restaurants are examples. Depending on the accessibility of a surf break, it can cause a large "migration" of surfers from wave-poor places or areas towards these destinations.

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Figure 1. Daubed surfaces found during authors site visit of Le Pin Sec, France (June 2019).

Further, in communities where surf tourism occurs, (some) local inhabitants take up the sport themselves from the moment they are exposed to surfing. Often a specific subculture develops, with a lifestyle in which surfing is of central importance. Given that surf breaks are limited natural resources, both local inhabitants and tourists are making use of these same resources simultaneously. Surfing typically happens one-wave-per-person, meaning there is competition in the water between surfers regarding who is allowed to catch most waves and thus enjoy their surf session to the fullest. This can create issues of carrying capacity and a competition that fuels tension between surfers. Local surfers feel hampered in their ability to make use of "their" resources (Figure 1). Therefore, this article will focus on these issues analyzing in-depth the situation at three French coastal departments in Nouvelle-Aquitaine, called Gironde, Landes, and Pyrenées-Atlantiques. This region is chosen because it is known to be rich in waves. Its exposure to open ocean makes it one of the key regions in Europe where surfing happens. Surf tourism here is thus an important niche within the tourism industry while Nouvelle Aquitaine is the second most important tourism region in France, attracting 27 million visitors in

2017 and 32 million in 2019 (Région Nouvelle Aquitaine, 2017; Fulleda & Lambé, 2019). Although surf tourism is highly established and well-developed, a review of research reveals little research on surf tourism in France, compared to a growing number of papers in other regions such as Asia, Australia, and North-America (Martin & Assenov, 2012) while formalized, long-term, and coordinated planning as recommended by Ponting, McDonald, and Wearing (2005) is not in place. The combination of the seasonal tourism setting of France and the lack of research on surf tourism reflects its needs for proper management which is why this research on surf tourism in France tends to fill some gaps.

This research aims to give insight into the (potential) conflict between local surfers and surf tourists in the context of a mature destination. Questions we aim at answering are about the degree and shape of the tensions that take place and how this influences the perception and behavior of surf tourism by local surfers. Explanations for the issue are sought and insight is given into possible solutions in order to improve and manage the current situation. The aim is to be representative for other surf destinations in France (e.g., at Brittany) and to some degree to developed destinations in other parts of Europe such as in Portugal and Spain.

This research uses a mixed method approach which will be explained in detail. First a literature review covers some issues on sport tourism in general (Section 2), surf breaks as a common resource (Section 3), and localism in surfing (Section 4). After the development of the methodology (Section 5), the quantitative and qualitative results are presented and discussed (Section 6), while the conclusions (Section 7) try to go beyond the particular case of SW France.

Surf Tourism in a Sports Tourism Perspective

Sport tourism is not only a direct consequence of globalization but "is accompanied by globalization: they [tourists for sports purposes] exhibit its manifestations and act as agents of its processes" (Melo & Sobry, 2017, p. 5). Availability of easy travel and innovations in the field of technology has allowed the market to prosper and motivates companies to creatively find new concepts related to sport and tourism. This is also the case for surf tourism.

Surf tourism is a prime example of the growing popularity of sport tourism towards specific geographical areas, as can be seen in the speed in which surf tourism became commercialized and available globally. According to Buckley (2002), surf tourism can be divided into two types: recreational surf travel, which is mainly when surfers invest and organize in surf journeys themselves, and commercial surf tourism, where tour operators package and prepare all-inclusive surfing holidays for guests and orient themselves more toward the surf market. Because of the surge in popularity in surfing and an increase in surfers' income, surfers generally look for holidays further away and in newer places, which causes the industry to grow and develop into different kinds.

Therefore, surf tourism falls in what is defined as the active sport tourism market, which concerns "active participants who may seek to develop their sporting abilities, seek competition, experience first-hand unique or famous sport places, develop a sense of personal identity and/or develop their standing within a sport subculture" (Higham & Hinch, 2011, p. 42). Surf tourism can as well be categorized according to demand groups: Surf tourists generally fall within either mass-sport tourism (focusing on high-intensity, high-quality individual sport goals) or occasional-sport groups (focusing on sport as a side-activity of the main holiday plan). Management of sport regions should thus focus on high quality of both, the sport facilities and general tourism facilities (Maier & Weber, 1993).

Due to its specific characteristics, surf tourism developed into its own research niche, although insights from other fields (e.g., sustainable tourism) can have implications for surf tourism. An overview of the development of surf tourism research is given by Martin and Assenov (2012). Their analysis shows that surf tourism research has gained significantly more attention during the last two decades. Research is carried out mostly in the USA, Australia, and Indonesia.

Sustainability is mentioned as a key component of most researches on surf tourism. Looking at community impacts of sport tourism in general and surf tourism in particular, the economic impact is closely related to the sociocultural impact (Ritchie & Adair, 2002), as benefits are often synergetic and provide multiple beneficial qualities. There is recognition for diverse community-building qualities (Jamieson, 2014) such as additional recreational possibilities, social capital, social cohesion, pride and also improvements in infrastructure (Gonzalez-García, Jacobo, Parra-Camacho, & Calabuig-Moreno, 2018; Péric, 2018). In surfing, often a social fabric is created which provides safety and predictability for local surfers when in the water (Daskalos, 2007). This social fabric focuses on long-term commitment to the place and the sport. Comley (2011) describes how surf breaks are not seen as public domain, but part of personal space and as such are inherently part of place attachment, defined by Altman and Low (2012, p. 2) as "the bonding of people to places". Research by Reineman and Ardoin (2017) on place attachment in Californian surf breaks reveals that many surfers own such attachment to surf spots. However, this attachment experiences stress due to popularization: "The traditional social network worked well […] for more than thirty years in some cases. It was, however, not capable of adapting to the dramatic growth in population in Coastal City in general and specifically at the breaks" (Daskalos, 2007, p. 171). When surfing is introduced as a new sport in a community, eventually an identity-forming process takes place; local surfers establish their own identity, which is able to compete with foreign influences. Both groups can develop social and economic power.

Looking at the economic impact of sport tourism in general, Hinch and Higham (2011) describe scale as one of the most critical concepts in identifying the economic success of sport tourism. It is important that a previously non-touristic region has the capacity to accommodate tourism. If not, residents experience excessive spending and tax increases as the most important negative economic impacts. Looking at surfing, surf tourists are found to have a highly loyal consumption pattern, often returning to a particular destination and staying long periods (Hritz & Franzidis, 2018). High-quality surf breaks are found to significantly increase economic growth in the surrounding area (McGregor & Wills, 2017). In a study towards the economic impact of surf tourism conducted in Mundaka, Spain, interviewed business-owners estimated a 50% drop in tourism income if permanent damage was done towards the wave in Mundaka (Murphy & Bernal, 2008).

In general, surf tourism is not about large-scale sports events with huge resulting economic impacts and leaving participatory sports tourism out of view; nevertheless, it goes beyond small-scale events suited to enhance the local culture, as it is not only or primarily for the local population (Péric, 2018).

Surf Breaks: A Common Pool Resource

The usage of surf breaks can be seen as a typical example of exploitation of common pool resources: The general benefits of a surf break are private, while the overall costs (crowding) are public (Comley, 2011; Rider, 1998). User conflicts are well-known in common pool resources and can be divided into two categories (Buckley, 2009): users conducting the same sort of activity and those conducting varying activities. Crowding is an issue belonging into the second category. Anybody who privately profits from making use of a common

good will always feel an incentive to making use of that good, even if the overall quality of the good will go down. This is also referred to as the tragedy of the commons (Nazer, 2004).

Of multiple types of carrying capacities, Ponting and O'Brien (2015) refer to physical carrying capacity (physical factors of a surf break allowing a certain number of people to make use of it at the same time) and social carrying capacity (compliance to a general etiquette, see further) as important for identifying carrying capacity in the surf break. The ability to act collectively against the "tragedy" is dependent on a multitude of both physical, external, and user-related factors (Wade, 1986; Gardner, Ostrom, & Walker, 1990). However, measuring and designing regulations that target crowding in surf breaks is practically impossible due to the complexity of carrying capacity in a surf break (Ponting & O'Brien, 2013). Surf breaks are difficult to clearly define; users are not easily identified outside of surfing itself and the unregulated and ungoverned nature of the break makes it impossible for rules to be enforced.

An overview of studies towards sustainable management of surf breaks shows that focus is mainly on environmental management (Scarfe, Healy, Rennie, & Mead, 2009). Surfers are often affected through regulations that are aimed at other marine purposes such as port regulations or coastal protection elements (Oram & Valverde, 1994). According to Ponting and O'Brien (2013), the only current existing legal example of federal regulations aimed at the promotion of surfing can be found in a case in Fiji. Marine environments that were primarily privately owned were opened up in order to foster surf tourism, resulting in crowding issues (Ponting & O'Brien, 2013; Scarfe, Healy, Rennie, & Mead, 2009). Positively, in the Maldives, increased interest by multiple stakeholders in the access of surf breaks resulted in a transfer of control from wealthy investors towards the public sphere, where all kinds of stakeholder groups could get involved in the decision-making process (Buckley, Guitart, & Shakeela, 2017). Non-legal examples are the World Surfing Reserves, which are coastal areas that are designated as protected areas by a non-profit organization, which safeguards them from alterations. However, these do not focus on crowd control (Save the Waves Coalition, 2019).

The absence of legal regulations concerning carrying capacity implies that there needs to be some other form of organization whilst surfing in the surf break and this is found in the widely accepted surf etiquette. Surf etiquette is defined by De Alessi (2009, p. 88) as "a fairly simple, widely-agreed upon set of cultural norms and customs for regulating behavior". The etiquette defines who has priority of wave catching in the surfer's lineup, what surfers have to watch for, and what behavior is unacceptable (SurferToday.com, 2018). This is determined through several guidelines, based on the surfer's location in the water and his relation to other surfers. It also involves simple means of communication (Surfing-waves.com, 2019). Surf etiquette is described in various articles as a system of conduct that is highly foundational to surfing and is widely known and agreed upon (De Alessi, 2009; Olivier, 2010; Nazer, 2004). An illustration of the rules can be found in Figure 2.

Surf etiquette is potentially very effective, as it creates structure and regulation to be applied to the crowding issue (De Alessi, 2009). Peterson (2013) found that if etiquette is collectively abided by, the perception of crowding in the surf can be reduced. Nazer (2004, p. 676) mentions "this norm is so fundamental to surfers that it is rarely even explicitly mentioned". However, the informality of the system creates problems: The wide array of different situations that can occur in the surf breaks and the different type of surfers that can be present (main purpose versus side-activity surfer) make the system difficult to pursue successfully (Fitzgerald & Clarke, 2001). Olivier (2010, p. 1225) states that guidelines are "both loose and muddied by context" because there are large differences in experience and the layout of every surf break differs as well.

Although surf breaks can be situated closely next to each other, quality can differ immensely (McGregor & Wills, 2017). Finally, wave-catching ability is influenced by the type of equipment used (different types of equipment may be used to experience different types of wave- riding), which causes some surfers to catch waves more easily than others (Olivier, 2010).

Figure 2. An example plaquette designed to educate surfers about surf etiquette (Plybon, 2018).

Localism in Surfing

Distribution of waves in a surf break can be code-centric, such as the etiquette system, or ego-centric (Deats, Martinez, Shearer, & Shearer, 2016). The latter hierarchical system, which is based on skills, provides highly-skilled surfers with many waves and limits the number of waves that is being caught by low-skilled surfers. Although the transition from the ego-centric strategy to the code-centric strategy "improve[s] the length and quality of a ride, and provide[s] locals with a greater percentage of waves" (Deats et al., 2016, p. 104), the code-centric strategy is not utilized everywhere due to the crowd simply being too large. This results in local surfers utilizing the ego-centric strategy. This is more commonly referred to as localism, which is defined as "an attempt to reduce the crowd by using violence and conflict in the water to stake out exclusive territories" (De Alessi, 2009, p. 85).

Useful in understanding the concept of localism in surfing is the notion of territoriality, as used by Comley (2011). Territories may be seen on a scale, varying from primary space (essentially exclusively personal) to secondary space (an in-between space where it is difficult to define ownership and control) to public space (everybody can make use of the resource in a free and unlimited way). Differences in conception of where certain borders lie result in the conflict and behavior that is linked to localism (Comley, 2011). Localism can be defined as "a form of cultural preservation, as a way of maintaining or even recapturing a sense of order that is

being threatened by the explosion in popularity of the sport [surfing]" (Olivier, 2010, p. 1224). Localism is generally caused by a lack of proper application of surf etiquette in a surf break. When new surfers on the break show insufficient understanding and respect to the "local" surfers already present in the break, "they need to be informed as to what constitutes acceptable behavior; and the only effective method of education seems to be intimidation and/or violence" (Olivier, 2010, p. 1224).

Although this negative perception is shown openly, as held by a group of residents, research also shows that these reactions are highly dependent on subjective and locational factors. The degree to which localism is occurring thus does not necessarily depend solely on the overall resident evaluation and perception of surf tourism. Uekusa (2018) clearly describes the dimensions of the distribution of power in the lineup of surfers in terms of Bourdieu's capitals. People who are new to a surf break try to improve their position in the lineup by improving on their capitals, for instance by getting to know the surf break and its mechanics and improving on their surfing capacity. They also have to find peace in the fact that there are power relations that prohibit them from catching many waves. However, this also fosters further development of differences in power in the surf break, as it empowers certain surfers to assert their dominance even more.

Methodology

The goal of this research is to be explorative of a relatively under-researched topic, at least in Europe. As such, multiple methods of data collection are utilized. As mentioned before, we used a mixed method approach. The most extended, quantitative part of the research aims at describing the tourism development and equipment among the different surf destinations in the research area and making a good case choice for our survey (n = 155). The qualitative part with several interviews (n = 7) adds at understanding tourism behavior and surf experience at the surf destinations in our research area and it provides grounds for formulating possible solutions or recommendations.

Coastal Destinations in Nouvelle-Aquitaine

Since the aim of this study is to be representative for surfing (in France), data are collected in a way they reflect the differences in a (French) surf break landscape.

The lack of appropriate data makes this quite complicated. The most specific information (this is on a municipality level) is found with the Institut National de la Statistique et des Études Économiques (INSEE) and focuses on the touristic accommodation offer per town. However, this does not provide any information about actual numbers of visitors or actual numbers of overnight stays by tourists. Contact with the Nouvelle-Aquitaine tourism board reveals a number of datasets that show occupancy of hotels and campsites (2017) for various coastal sub-regions. More detailed data could not be found. As such, a proxy was created for a "high-season occupancy per inhabitant" index, based on the touristic accommodation supply of each municipality (2017) and the corresponding occupancy rates for the overarching sub-region (2017).

Cluster analysis was utilized in order to create groups upon which representative case choices for conducting fieldwork could be chosen. Three variables are important in determining the cluster groups: population, the number of places on camping sites, and the (estimated) tourism index described above, which resulted in four groups (Table 1). Municipalities are grouped according to their position relative to the cluster averages for each of the variables. The first cluster consists solely of Anglet, a city with a relatively low tourism index and limited campsites. The city has an oceanfront boulevard with many surf breaks along it. The

second cluster consists of a number of medium-sized towns with a diverse mix of accommodations on offer and moderate tourism importance. The third cluster consists of very small villages where tourism and the presence of campsites are predominant. The fourth and final cluster contains small and medium-sized municipalities where camping is important, although less than in the third cluster. In Table 1, distance to the cluster centroid and values for all three determining variables can be found.

Table 1

Clusters, Cluster Variables, and Most Representative Observations Based on the Centroid Distance

Cluster	Variable	Average for cluster	Closest observation	Second closest observation	Third closest observation
1	Distance to cluster centroid	-	Anglet	-	-
	Nr_inhab	38,724	Anglet	-	-
	Campbed1000	13	Anglet	-	-
	Tourest1000	89	Anglet	-	-
2	Distance to cluster centroid	-	Hendaye *2,060*	Biscarrosse *4,127*	Saint-Jean-de-Luz *4,242*
	Nr_inhab	16,328	Hendaye	Biscarrosse	Saint-Jean De Luz
	Campbed1000	420	Saint-Jean de Luz	Hendaye	Biarritz
	Tourest1000	415	Saint-Jean de Luz	Hendaye	
3	Distance to cluster centroid	-	Vielle-Saint-Girons *3,756*	Messanges *3,756*	Vendays-Montalivet *4,714*
	Nr_inhab	1,423	Grayan et-l'Hôpital	Vielle-Saint-Girons	Moliets-et-Maa
	Campbed1000	7,197	Vielle-Saint-Girons	Vendays-Montalivet	Grayan et-l'Hôpital
	Tourest1000	5,952	Vielle-Saint-Girons	Moliets-et-Maa	Vendays-Montalivet
4	Distance to cluster centroid	-	Lacanau *314*	Hourtin *1,027*	Seignosse *1,201*
	Nr_inhab	3,945	Seignosse	Soorts-Hossegor	Hourtin
	Campbed1000	1,524	Le Porge	Vieux-Boucau-Les-Bains	Seignosse
	Tourest1000	1,444	Hourtin	Le-Verdon-Sur-Mer	Seignosse

Notes. 29 coastal municipalities were taken into consideration for the cluster analysis. Centroid distance in italics. Nr_inhab, Campbed1000, and Tourest1000 refer to the number of inhabitants, camping beds per 1,000 inhabitants and estimated tourism per 1,000 inhabitants respectively.

An overview of surfing in these municipalities is ensured through an additional dataset compiled of multiple sources which are Wannasurf.com, which is an online user-based encyclopedia-type of website; *The Stormrider Guide: France* (Sutherland, 2012), a book which is widely considered to be an expert-guide in surfing and in understanding surf breaks around the world; and Surf-forecast.com, a detailed forecast-website with meteorological information concerning expected wave quality.

Apart from giving insight into specific surf break qualities at these municipalities and indicating which municipalities have surf breaks, these data already provide insight into the degree to which a crowding issue is at hand. Stormrider Guide gives general surf break descriptions and includes an assessment of crowding and both Wannasurf and Surf-forecast.com include user-based ratings of a number of surf break qualities among which the degree of crowding. Therefore, these scores serve as a first indication of crowding per surf break.

Since rating scales differ in length over various sources, the ratings are given equal weight and are then summed, to receive an eventual crowding rating on a scale of 3 (not crowded) to 15 (crowded). Descriptive

statistics are used in order to get a first overview of crowding and get insight into differences between the various clusters (Figure 3). An ANOVA procedure is utilized in order to determine if there are significant differences in crowding of surf breaks between clusters.
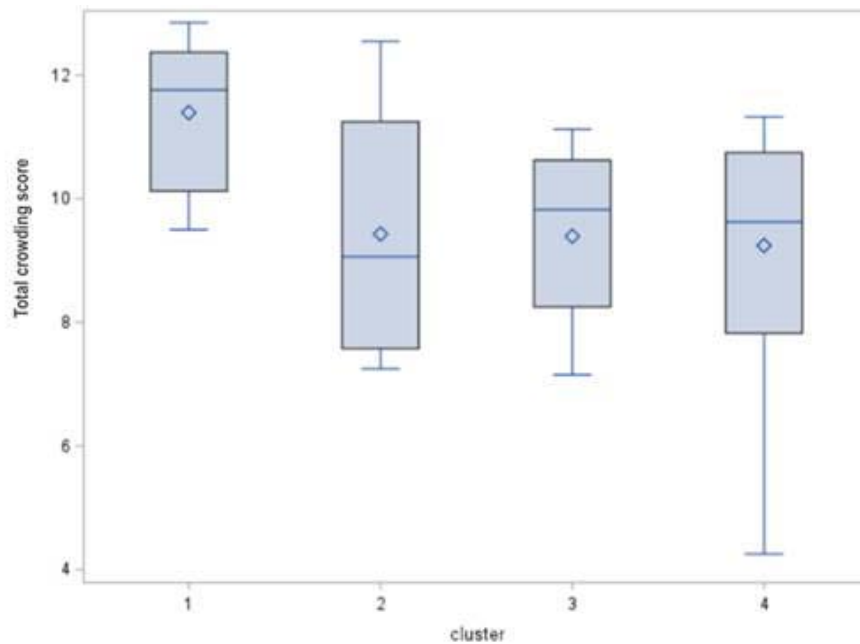

Figure 3. Boxplot of total crowding rating (based on mentioned secondary sources) for the various clusters.

Survey

The primary sample target group for this research is the group of *local surfers* for the destinations mentioned above. Other target groups that were used for cross-sample comparisons were *non-local surfers* and *local non-surfers*. Non-local non-surfers were not taken into account. Additionally, from local surfers, the aim was to have half of them working in the tourism industry and half of them not. To define whether a person is a "local" surfer, this person needs to define themselves as a local of a municipality that is within 30 kilometers of that surf break. This is done because it is expected that many local surfers use multiple surf breaks in the vicinity of 30 kilometers of their residence as their regular surf breaks. The survey contained 36 questions, of which 10 (nominal) questions focusing on identifying personal factors of respondents such as age, gender, whether they are local or not, (tourism) employment, and surfing behavior. The other 26 (ordinal) questions were aimed at collecting information concerning the crowding issue. Specifically, the survey focuses on the occurrence of crowding (e.g., the question: *My local surf break can only accommodate a limited number of surfers at the same time and often, this number is surpassed*) which will be referred to in the results as "indicated degree of crowding". Additionally, questions focus on how crowding affects surfers enjoyability, and who respondents hold responsible for causing a crowding issue, if any experienced. Additionally, the survey identifies to what extent respondents have a positive perception of surf tourism. Words with a negative connotation, such as "overcrowded", are avoided in both surveys as to avoid suggestive bias.

Fieldwork for the surveys was carried out in 2019 (during French spring break). Data were collected physically with the help of mobile devices upon which the survey was to be filled in. Respondents were found through seeking out places where surfers would usually be, such as surf shops, bars, and restaurants and, most

of all, surf break parking lots. A helpful method to find local surfers was to identify them by departmental codes on the license plates. Most respondents could be found during weekend days, when they would be off work, as well as when the surf proved to be good. Still, data collection proved difficult at times. Respondents were easily found for the two larger clusters (1 and 2), which was not the case for the clusters with small destinations (3 and 4). Additionally, surf quality highly varied in that period and therefore, the decision was made to also start gathering data in other than the preferred cluster municipalities for cluster 3 and 4 (Table 1, "closest"), in order to reach a substantial number of respondents.

A total number of 155 responses were collected, of which 102 were surfers (69 local surfers, 33 non-local surfers). 53 respondents were non-surfing locals. Roughly half of the respondents were between 20 and 34 years old. The largest proportion of the population was working; 72% of the population either works under contract or owns a business. 100 respondents indicated that they were not working in tourism (65%). When looking specifically at surfers, only 61 out of 101 indicated they had a job in tourism (60%). Of the surfers that work in tourism, 67.5% indicated the employer was a surf-related tourism organization. The results of this survey are presented below.

Interviews

To enrich quantitative survey results and to provide insights for discussion and further research, an additional amount of semi-structured interviews was organized. The goal here was to get insight into the deeper meaning of some participants' survey answers, and to get a more personal perception on how crowding functions and what its key components are. Additionally, the goal was to collect views on possible future outlooks and directions local and regional management can (must) take in order to work towards a more sustainable situation. Interview respondents who showed a real interest in the subject during the survey and agreed to take part in an interview were recontacted later for an interview over the telephone. Seven (local) respondents took part in a depth interview. The shortest interview took approximately 30 minutes; the longest interview took approximately 70 minutes.

Results

The Issue of Carrying Capacity

Most local surfers indicate there is an issue of carrying capacity: 84% of local surfers indicate this at least happens sometimes. Looking at all surfers, nearly all of them recognize when the issue is at hand and adapt their attitude towards other surfers. Seasonality was already expected to have an influence, but differences are spectacular (Figure 4).

As for the local surfers, 60 out of 69 surfers indicate they experience a crowding problem often or even always in summer. When asked which subgroup of surfers is most responsible for the crowding issue, local surfers are thought to be least responsible. Both international and French non-local visitors are often held responsible (Figure 5).

Crowding is confirmed to occur by all interviewees. Various respondents describe the seasonality aspect. One respondent from Moliets-et-Maa describes the summer as "the time when all the surf camps and all the surf schools have their courses, so it's very crowded". Many examples are given of situations where this issue causes tension with local surfers. As for the cause, interviewees indicate that besides the number of visitors being larger, there is also a lack of knowledge concerning surf etiquette and priority rules in the water amongst

new surfers. The same respondent mentions: "*people come, who don't respect the rules*, [they do not know] *how it works in the water, who ride over other people, who are endangering other people*". Thus, both the behavior and number of visitor-surfers is seen by local surfers as a cause for increased problems in the water.
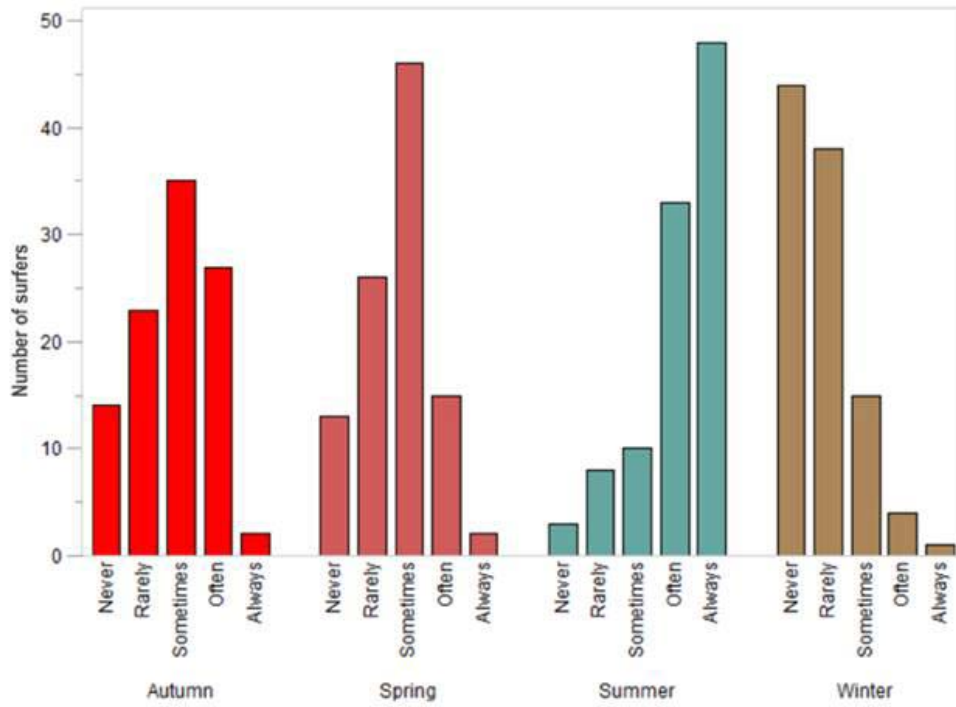

Figure 4. Surfers (n = 102). Indication of how often the crowding issue occurs, per season.
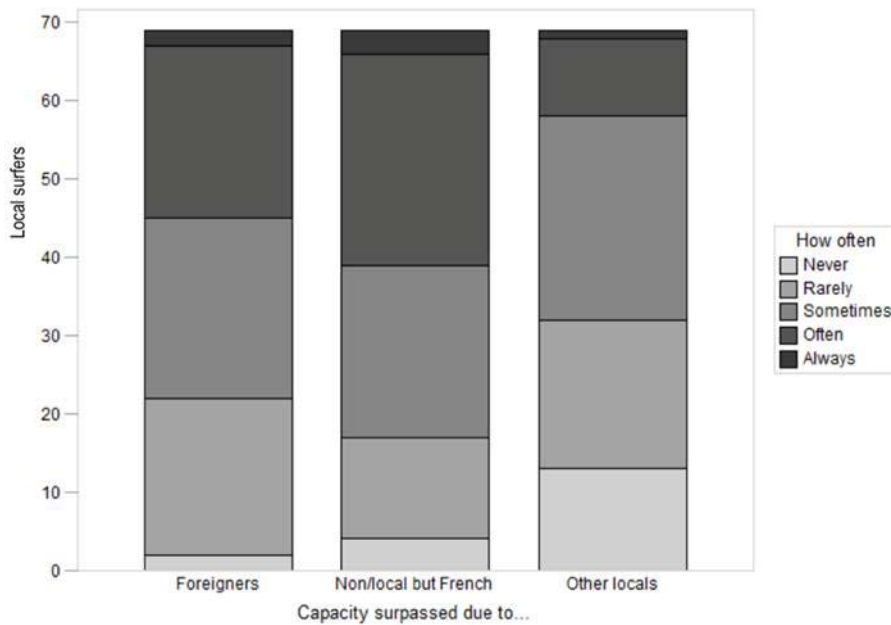

Figure 5. Indication by local surfers of who is responsible for crowding (n = 69).

Influence of Various Factors on the Indicated Degree of Crowding

Many factors were tested in order to see whether they have an effect on the degree to which (local) surfers

indicate the crowding issue is taking place, such as gender, age, occupation, surfing experience, surfing frequency, and whether a surfer is local or not. However, none of these factors are found to impact the crowding degree. Testing if various factors could have a combined influence (logistic model) indicates that this is not the case either.

The influence of the geographical location of a surf break (represented in this research by the aforementioned clusters) on crowding can be compared in two ways: firstly, by comparing the earlier-mentioned indication of crowding per surf break derived from secondary data (using a nonparametric one-way ANOVA) and secondly by comparing the indicated degree of crowding by local surfers. In both instances, no significant difference between clusters is found. Thus, geographical differences do not seem to influence the degree to which crowding is indicated but, of course, we have to take into account that this research was done during Easter Holidays, rather than summer holidays. Perhaps, when focusing specifically on the summer period, different results are found. It is remarkable that one interviewee (from Seignosse) mentioned to walk down the beachline towards less crowded surf breaks as a good solution to avoid overcrowding.

Enjoyment

A consequence of the issue of carrying capacity is that surfers are affected in their enjoyment of surfing. This is seen in the results, as most local surfers would also indicate that the issue of carrying capacity influences their enjoyment of surfing negatively. Many surfers indicate that they think other surfers experience this issue as well. There is also a significant positive association between the degree to which crowding is indicated and the degree to which the enjoyment of surfing is negatively influenced. Whenever surfers experience crowding more often, their enjoyability is also affected more severely.

There also seems to be a relation between the degree to which enjoyment is influenced and the origin of the surfers in the study. A local surfer experiences more severe decrease of enjoyment when experiencing crowding in surfing. However, when local surfers work in the tourism sector, their enjoyment is *less* affected by crowding when they are working in the tourism sector. A significant negative association is also found between employment in the tourism sector and the degree to which a surfer indicates his/her enjoyment is lowered because of the crowding issue. Thus, whenever a local surfer works in tourism, he/she seems much more tolerant when experiencing crowding issues and therefore is less influenced in terms of enjoyment, or at least says so.

Interviewees underline how the importance of surf tourism influences local surfers understanding of the advantage of an increased interest in surfing for the local community: "*Step by step, there are more and more local people who work in tourism. So that changed a lot, and I think the stranger-surfers are now more welcome. In a way, it's a good thing*". Looking at the sport of surfing, there is consensus under respondents that the sport is still gaining new practitioners and there will be an increase of surfers in the surf breaks in the future. One interviewee does not see this as a negative development, as he thinks the increased crowds will make frustrated surfers realize there is no way back. He aptly names it "*crowd, but with a smile*".

Localism and Surf Etiquette

Regarding surf etiquette, most surfers indicate they are aware of the surf etiquette and the behavioral norms it implies. Nevertheless, a social desirability bias could be found: Most surfers indicate they always use the surf etiquette, whereas there is almost nobody who indicates that other surfers also utilize the surf etiquette. There is also a large group of surfers that indicate local surfers deserve right of way over non-local surfers. In contrast, there is a large group that "feels" a lack of respect for local surfers.

One of the authors of this article, being a surfer himself, indicates that surfers know quite well who is local and who is not because they "belong" to certain groups. Interview results underline this as well. An interviewee from Messanges explains the difference between "hard" locals and more seasonal inhabitants. He describes a social surf club, where (young) locals go to surf together. Another local surfer from Hendaye describes that local surfers cooperate in finding "quiet" surfing places: "*Like, you know where the spots are, […] we have a place in Hendaye, when you go, then you will be alone. Or with friends. […] So, we go there, and we know that we will be alone*". This expectation of respect is based on a feeling of ownership which, in turn, is part of local identity.

Localism, mentioned in the literature study, is expected to increase when local surfers start to be hampered in their ability to surf. Localism was analyzed in this study by means of the notion of territoriality and measured by the indicators "right of way for local surfers over other surfers" as well as "respect for local surfers". For localism, firstly it is important to know if it is linked to the evaluation of the crowding issue—whether their enjoyment is decreased because of it—and secondly if it is influenced by the perception on tourism more in general by local surfers. Results however do not show an association between the degree to which a surfer's enjoyment is limited because of crowding, and the degree to which they feel local surfers deserve right of way. There is also no relation between the enjoyment and the degree to which they feel local surfers deserve more respect. For now, we assume that there is no relation between the crowding issue and localism, at least not in high season. There are some indications though.

Crowding does lead to local surfers distancing themselves from visiting surfers: One respondent described how locals have already distanced themselves from visiting surfers since 10 years. Other respondents describe how local surfers will seek out their own surfing times and surf breaks, and state it is better not to disturb them there. A respondent from Moliets-et-Maa explains that many local surfers work in the tourism business and therefore will avoid surfing during the summer altogether. As mentioned before, an interviewee from Seignosse explains how he walks down the beachline towards a less crowded peak as a "good solution".

Perception of Surf Tourism by *Local* Surfers

Several statements in the survey assess the perception of surf tourism by local surfers: happiness with surf tourism, visitors-who-surf contribute to a nice atmosphere, visitors-who-surf contribute to the local economy, visitors-who-surf stimulate pride on their region. Significant positive correlations between these four statements can be found and grouping them gives a single variable score for the perception of surf tourism. This variable "perception" has a mean score of 16 on 20 (min. 13; max. 18.5).

Looking specifically at local surfers, one can compare the perception indicator between those who indicate a crowding issue and those who do not. This shows that local surfer's (average) perception of surf tourism seems to be significantly worse when they indicate an issue of crowding (Figure 6).

Most of the interviewees describe how their region is growing, both economically and in number of inhabitants. Some respondents indicate they are concerned an increased economic activity in the region as it might harm the region both socio-culturally and environmentally. However, others mention how economic development is beneficial to their village because it can bring possibilities for labor. When a respondent works in the tourism sector, his/her perception of surf tourism is found to be significantly better than when they are not working in the tourism sector.
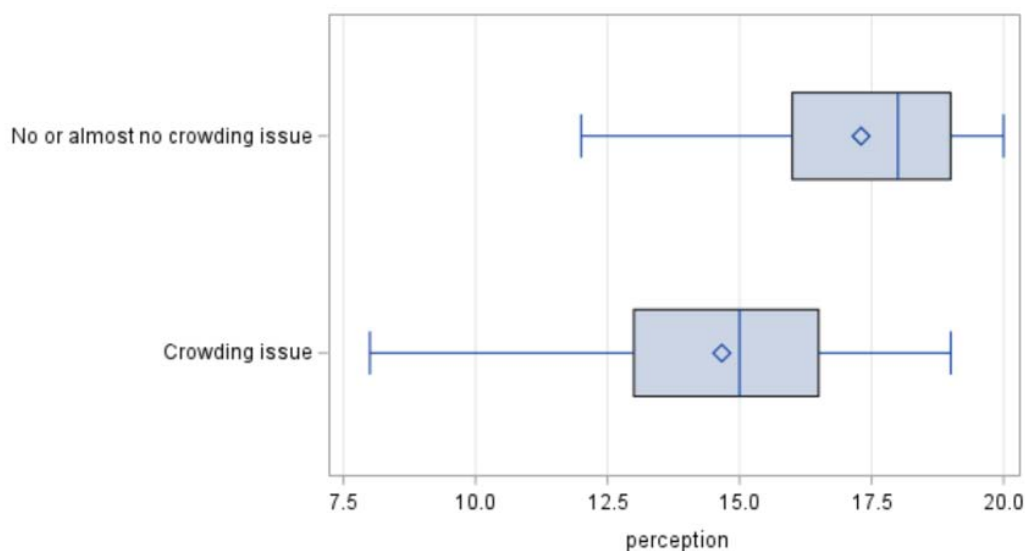
Figure 6. Local surfers (n = 69). Indication of crowding issue vs. perception of surf tourism.

Possible Solutions

Clearly there are different types of reactions to the crowding issue as a result of differences in local surfers' mindsets. Evaluation of the situation at the surf break and behavior are a result of that mental orientation. More often (the need for) a positive mindset is underlined: "*Open your mind and share something with foreigners, learn them how to surf and how to be patient, and if you teach nicely everyone and you share with them, you will show them the good and polite attitude, they will probably reproduce that later*".

Several interviewees describe how the mindset is already changing due to the relentless increase in surf tourism over the years. One respondent describes how he thinks the problem will actually solve itself over time, when (young) local surfers do not know any other situation than crowded beaches (without management). He mentions how he experienced this in California, where constant crowding eventually led to less tension in the water.

Our results indicate an association between the perception of surf tourism and the degree to which local surfers think that visiting surfers show them respect. Results thus indicate how a positive perception of surf tourism means that local surfers also think that visitors show sufficient respect to the local population and vice versa. The element "respect" is therefore key to master conflicts for surf breaks as a resource and by extension to manage friction between locals and visitors in general.

A solution that is generally *not* preferred is the application of regulated and enforced crowd-control measures to surf breaks. This is not preferred due to both practical constraints, as well as philosophical: surfing is described to be a sport of individuality and freedom, which would be lost. A better alternative is the stimulation of learning. Respondents mention all kinds of ways to promote understanding of the surf etiquette, such as putting up signage at beach entrances, advertising usage of surf etiquette in surf media, or through mandatory inclusion in learning programs at surf schools. Finally, communication is mentioned as key in fostering a better atmosphere in surf breaks and is mentioned as something to be lacking in current surfing. Surfers generally do not greet each other, and do not speak much if they do not know each other.

Conclusion

Surfing has become more popular over the past decade, resulting in a proliferation of surf tourism in the region of Nouvelle-Aquitaine as in many surf destinations around the globe. This creates employment opportunities for many local surfers, but it results also in the occurrence of crowding issues in the water. This study has shown that crowding occurs extensively in summer along the French coastline, although France (and Europe for that matter) is not often counted among the top surfing destinations. (Surf) tourism employment is an important determining factor in the degree to which surfers think that crowding is taking place. Differences in benefits from surf tourism among local surfers correlate with perceptions on behavior of surf tourists and joy that surfing brings. This is in line with findings by scholars concerning unequal benefits of tourism development and appreciating of tourism by locals more in general. For that matter, surf tourism is not different from any kind of (sustainable) tourism; it is able to deal with short- and long-term impacts if it respects stakeholders who have a sense of ownership. Therefore, it is important to understand how stakeholders who live in (with) it, use and manage the resource, perceive tourism that commodifies that resource (George, Mair, & Reid, 2009).

The surpassing of the carrying capacity of a surf break creates tensions between local surfers and visiting surfers. Many characteristics that are found in other research on common pool resources also pop up in our study on surf tourism. Conflicts spark territorial behavior that can exist through the absence of regulation or proper implementation of etiquette. Local identities are established, which is something that respondents in the interviews indicate. Local surfers note the appearance of localism, and although the actions may be denounced, the motivation is understood: There is a problem of carrying capacity within the French surf breaks. The highly seasonal character makes that the crowding issue occurs far more often in summer time. This makes that local surfers adapt their surfing behavior, according to the season and maybe—only indications—according to the geographical location.

It is interesting to see that respondents indicate they see a change in mindset regarding localism over the past decennium. Olivier (2010) describes localism as a form of cultural preservation—however, once the new standard (surf tourism) stays around long enough to replace the previous culture (local use of surf breaks) entirely, there might be no reasons anymore to actively pursue localism. One of the elements that need further investigation is the local sense of ownership and the contribution of surfing to the local identity. The latter, in turn, depends on the fact of surfing being rooted in the local culture through history or if surfing was "imported" by non-local surfers.

Although evidence is too limited to draw definitive conclusions on the degree and nature of localism in our study area, it is mentioned by respondents that surf etiquette can create structure in the water. It is clear that the system is not widely applied by all surfers due to the informality of the system and great differences in both the knowledge about surf etiquette of surfers and the degree to which they choose to apply it. Various ways of learning about surf etiquette can increase its application by surfers, and communication can alleviate tensions amongst surfers. All this is based upon surfers showing respect to one another and working towards a positive atmosphere. Everybody who is surfing in this area is a stakeholder in ensuring that more crowding does not result in tension, localism, and other types of problems, and thus everybody should be motivated in order to work on the solutions mentioned above.

In all cases, the most important solution, also mentioned by participants in our research, is education about respect. Respect is indicated by all respondents to be important in achieving a sustainable situation. The main

idea is that whenever you are surfing, whether you are local or a visitor, respect is key in order to work towards a situation where the atmosphere is friendly. Respect fosters positive mindsets during surfing which can stimulate others to also be more respectful in the water.

Some respondents mentioned a change in mindset. One direction of future research could explore to what extent this process is naturally occurring and can thus be expected at other surf breaks or even other types of natural common resources. Another research line could focus on the regulation of surf teacher diplomas, commonly done by the International Surfing Association (ISA), and differences for these diplomas between France and other countries. Whereas the ISA diplomas are often said to be relatively easy to obtain, the French surf tests much harder and requires a high level of competence which is not requested anywhere else in the EU. This can be seen as beneficial, because a higher level of teaching is required, but could also be seen as protectionism. The question remains what competences are focused on, the technical or (also) the ethical ones. It could be interesting to see how ethical issues are taken into account by tourism organizations and other stakeholders.

Of course, one might think of limiting numbers of those who use the resource. What about:

> Tourism development that generates net benefits […] and protects the environment [and respects local ownership] will place restrictions on human activity [e.g. surfing] and challenge our current rapid expansion development model. In other words, there may be strong moral imperatives but [as a consequence] weak profit margins. (Chok, Macbeth, & Warren, 2007, p. 161)

Is this possible and wanted for surf tourism, making use of a common pool resource and, per definition, being little organized and individual? The covid-19 crisis created eventually an opportunity for reflection. In the summer period of 2020 (June-September), the number of tourists in Nouvelle-Aquitaine dropped with 26% (18% at the coast) while 49% of the foreign tourists (43% at the coast) stayed away (Région Nouvelle-Aquitaine, 2020). It is too early to predict if the pandemic will lead to a permanent downsizing of (non-local) surf tourism. At least, the pandemic makes clear what it means to drastically limit the number of users. If this is an incentive for a change of attitude towards (non-local) surf tourism in a positive or negative way and if this creates the right circumstances to tackle elements such as localism, trust and communication on crowding of surf breaks, is too early to predict but worth a follow-up research.

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