

**Shellfish past, present and future:**

## **Shell fishing as cultural and natural heritage in the Algarve**

Jordi Vegas Macias

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*“Vivo sempre no presente.  
O futuro, não o conheço.  
O passado, já o não tenho.”*

*“I always live in the present.  
The future, I don't know it.  
The past, I don't have it.”*

Fernando Pessoa

I would have never expected some years ago, that I would end up doing a study program in the Netherlands, or that I would carry out research fieldwork in the south of Portugal as part of my education. The initial decision was not easy. Past experiences or just some thoughts about uncertainty and the unknown, were constantly playing on my mind and raising doubts about my future. Then, I decided to live the present and ask to myself, why not?

For quite some time, I have been following my intuition as a way to open myself to new experiences and to unlock my own potential. Education is part of this self-developing progress and thanks to this research experience, I have had the chance to develop my skills, values, and re-confirm my passion. Even more, I have discovered new enthusiastic future scenarios that were beyond imagination, like potentially doing more research for the good of the people and the environment.

While I am writing these words, I want to thank all the people that in a certain way helped me to go through this experience and who contributed to my personal development.

Firstly, the people I have met in the Algarve which made this research possible as it is. They spent some of their time to receive and host me and let me into their lives. They already have a special place in my memories where I will treasure every one of the moments I spent in their home.

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I have discovered that my enthusiasm to help the people from the Ria Formosa has been bidirectional. I wanted to provide information to make the *Sotavento* Algarvio a better place to live in but I ended up having an experience whereby I received far more than what I initially expected from this journey.

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## Abstract

Development and territorial management in coastal areas is challenging, especially when food production takes place in vulnerable natural areas which are at the same time used for other activities, such as tourism. Shared spaces in general can lead to conflicts and tensions, as different actors bring in specific dynamics and a variety of interests and perceptions. This becomes even more evident when coastal fisheries reflect a region's culture and heritage, through cultural landscapes, traditional fishing practices and customs, and bringing food products for local and regional dishes. This research will elaborate on how tourism development and the shell fish sector see shell fishing as part of the cultural and natural heritage, how they interact with each other and the importance of communication and collaboration in managing shellfish as heritage. It illustrates the difficulties through the case of *Ria Formosa Natural Park* in the Algarve – a unique ecosystem designated under the RAMSAR convention, and the site of the nursery grounds for many key fish species in the lagoon system. The park is also one of the biggest nature-based tourism attractions in Portugal, providing and ensuring livelihood support for the local communities in the *Sotavento* area. This particular case presents heritage images and place dynamics based on the perspectives of shellfish producers and tourism agents, and shows the present and future challenges. The aim of this research is to shed light on the current dynamics and discuss a common long-term vision on shell fishing as cultural and natural heritage, and how the shellfish and tourism sectors can coexist in the present and in the future.

**Key words:** “Shellfish production”, “Tourism development”, “Cultural and natural heritage”, “food and tourism” and “Discourses”.

## 1. Introduction and problem statement

### 1.1 Shell fishing and tourism in the Algarve

In the southern region of the Algarve, Portugal, like many other popular coastal areas, local fishing communities live together with visitors. Locals' everyday lives are normally shared with tourists but also their most traditional livelihoods such as the lagoon system where shell fish is produced or caught, are also shared with other economic activities such as tourism. The *Ria Formosa Natural Park* is an important producer of shellfish not only in the Algarve or Portugal but also in Europe. The food networks are an essential part not only of the fishing local economy but they also provide development opportunities for the tourism sector in the Algarve. It serves and provides food to hotels, restaurants and tourists (Guimarães, M. H. M. E. *et al.*, 2012). Moreover, the natural area is a place for nature-based tourism activities and nautical tourism, which has been growing over the last few years.

But shell fishing is more than an economic activity. Different types of traditional food production linked to shellfish are taking place in the same area, which are deeply rooted in the local culture. It represents a lifestyle, linked to the identity of the local community with a lot of history and cultural characteristics. Traditional shell fishing is still alive and reflected through their arts and crafts. Together with the shellfish products and landscapes in the *Ria Formosa Natural Park* where shell fishing is practiced, shellfish producers offer a wide representation of the local cultural and participate in shaping the landscapes of the Algarve.

For tourism, the shell fishing sector can be seen as an opportunity to provide and portray the *Algarvian* identity, and image of authenticity (Sims, 2009) to promote and brand the region in order to attract visitors and preserve the local culture.

Given the rapid growth of tourism in the Algarve, this research looks at its development in relation to the shellfish producers' livelihoods. Moreover, tourism development strategies in the Algarve aim to connect traditional food products with tourists, to promote and preserve the local heritage, link urban and rural areas through food production places and gastronomic routes, as well as to diversify the offerings to reduce the strong seasonality (Turismo de Portugal, 2014; Salvador, Ricardo and Charles, 2013).

Tourism can potentially offer alternative opportunities for shellfish producers to rejuvenate their livelihoods by proposing economic activities linked to more tourism-oriented business or integrating their activities within tourism with cultural and natural experiences (Henderson, 2009). However, not all food producers are willing to share their space or become part of new or alternative activities, which to many, can be seen as unnecessary effort added to their daily activities or a threat to their livelihoods (Hjalager and Johansen, 2013).

It is interesting then to look at the interaction between the shellfish producers and tourism activities in the space of the *Ria Formosa Natural Park* to understand how these developments are perceived by the actors involved.

Yet, whether shellfish producers are involved in tourism or not in the Algarve, they are already contributing to an important image of the region which is used by the tourism industry to portray local identity and traditions, to bring the freshest shellfish products and their working places constitute unique cultural landscapes.

There is insufficient information available about what shellfish producers think about their role in relation to tourism, particularly relating to cases where tourism is actively using the same space through a more socio-cultural approach. Together with some views and opinions of the tourism actors as well, this research looks in particular at the different narratives and representations about the place, culture and food they produce and how they are affected or benefiting from tourism.

## 1.2 Relevance of the study

Even if the development of tourism can be beneficial for the local community, different tourism activities strategies can also influence in different ways the shellfish producers' livelihoods. This could lead them to undesirable scenarios where shared spaces can lead to certain tensions, conflicts or show inequalities that could bring more constraints to their economy, or affect possible collaborations and synergies between tourism actors and shellfish producers. This could also have an influence on the cultural and natural heritage in the *Ria Formosa Natural Park* as new dynamics and outcomes of these new relations are not yet studied. Hence, this research aims to explore this case by analyzing in particular different views and narratives about the shellfish producers' and tourism actors' roles and dynamics. Several reasons have motivated this choice:

i) According to Ferreira dos Santos (2015), shellfish is perceived as the most iconic and representative food product to promote the *Algarve* together with fish and shellfish, and amongst the favorite foods for local and international consumers. Hence, a strong cultural heritage image relies on these food products.

ii) There is not too much information about the shellfish producers and their involvement within the tourism development in the Algarve. Their production places are also shared with more actors involved in other economic activities and therefore, it is of interest to know what dynamics, collaborations and tensions are there and how these affect the preservation of the cultural and natural heritage.

iii) According to the FORWARD study (Ferreira, J. G. *et al.*, 2012), there is a need for more research and understanding of the socio-cultural context of the shell fishermen as it is essential to get the holistic view of the shell fishing sector in the *Ria Formosa Natural Park*.

iv) Drawing from Gonçalves, A. *et al.* (2011), there is a gap or disconnection between the local labor market linked to shell fishing and the tourism sector. The ATA (Tourism Association in the Algarve) is trying to develop sub-products based on nautical activities or gastronomy. Research remained unexploited and stresses the lack of available information about the constraints and the activities in the protected areas such as the *Ria Formosa Natural Park*.

v) More tourism strategies and projects are now on the agenda, to develop food and tourism related initiatives to cultural and natural heritage but also regional differentiation i.e. Algarvian gastronomy. Regional policies also address critical factors related to the local development where food producers play a key role (UNWTO, W. T. O., 2011).

vi) The decreasing number of young generations taking over the traditional shell fishing activity can threaten the sector or transform it, which could lead to the declining of a traditional activity, strongly linked to the cultural identity. (Ferreira, J. G. *et al.* 2012).

vii) The shellfish production is placed in the *Ria Formosa Natural Park*, a unique ecosystem designated under the RAMSAR<sup>1</sup> convention with particular landscape features linked to the local culture, community and one of the most attractive food products. Considered one of the main shellfish production places in Europe and one of the seven wonders in Portugal, it is of interest to see how this system copes with the development of tourism and how its cultural and natural heritage is affected by multiple stakeholders.

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<sup>1</sup> The Ramsar Convention is the intergovernmental treaty that provides the framework for the conservation and wise use of wetlands and their resources. The Convention was adopted in the Iranian city of Ramsar in 1971 and came into force in 1975. Since then, almost 90% of UN member states, from all the world's geographic regions, have acceded to become "Contracting Parties". Retrieved from <https://www.ramsar.org/> on the 8th of April 2019.



### 1.3 Aims of the research

Hence, the aim of this research is to gain a better understanding of the dynamics between shellfish production and tourism development in the *Ria Formosa Natural Park* and how these are linked to the provision and preservation of the cultural and natural heritage. Firstly, I gather views and opinions from shellfish producers and tourism agents whose activities are related to the same space where shell fishing is taking place. Then, I apply a discourse analysis, looking for doings, sayings and material arrangements. The results should illustrate first, how shellfish producers and tourism actors and their activities involved in the *Ria Formosa Natural Park* are seen by themselves, and second, provide knowledge of their interactions and try to highlight dynamics as well as potential points of tension, friction and conflict. This research aims to provide information for policy makers, shell fishing producers and tourism actors to identify potential opportunities to develop collaborations and enhance the communication, while addressing potential threats than might affect their shared space.

### 1.4 Research questions

RQ1: How do shellfish producers and tourism actors understand the role of shell fishing in sustaining cultural and natural heritage?

RQ2: How do shellfish producers and tourism actors relate to each other in sustaining cultural and natural heritage and how do they practice it?

RQ3: How are shellfish producers' livelihoods affected by the development of tourism? What are the dynamics and tensions between these two sectors?

RQ4: How do shellfish producers contribute to sustaining a regional identity in the Algarve and how do they practice it?

### 1.5 Research structure

This research is structured in seven chapters, following an order to introduce the case, the process and the outcomes of the study.

Chapter 2, through the use of a literature review, introduces first, different cases to illustrate how food and tourism are connected and what synergies can be established between them. Secondly it outlines theoretical concepts how fishing communities are linked to cultural and natural heritage through their production places, identity, arts, lifestyle and shellfish food product as part of the local gastronomy. The second section of the literature review contributes in building-up the concepts of people, place and product that will be used for this research. Finally, some cases and examples of initiatives in the case of the *Ria Formosa* area are presented to provide context and show the different development initiative that have been already discussed.

Chapter 3 explains the conceptual framework which introduces and uses concepts and examples from the literature review, to refer to people, *place and product* as a way to compose the theoretical background design in which this study looks at the views and opinions of the participants about shell fishing and the different dynamics that I want to analyze. It also presents the concepts that are implemented to look at the different interactions between the shellfish and tourism sectors.

Chapter 4 presents the methodology, with an introduction to the qualitative methodological process and design, the different methods employed during the data collection, together with the research design. It also describes the analysis approach, the position of the researcher and the reliability and validity of the study.

Chapter 5 outlines the analysis of the results by combining shellfish producers' and tourism agents' narratives with field observations and photos. Results are divided in 4 sections according to the research questions and the chapter provides findings and a preliminary analysis. Firstly, it introduces the typology developed in this research, followed by the perceptions on people, place and product involved in the shellfish sector. Secondly the different ways in which the shellfish and tourism sectors are related to each other. Thirdly the different dynamics tensions and influences the *Ria Formosa* as a livelihood. Lastly, the different collaborations and ways in which the shellfish sector is participating to sustain an identity in the area.

## 2. Literature review

With this literature review, I aim to illustrate through different studies the concepts that I will use to design the research framework to collect and build-up the data, in an attempt to provide conclusions to the research questions in order to recommend potential further actions.

The literature review is threefold. Firstly, I introduce cases of different dynamics, benefits and influences between food and tourism development. Secondly, I use examples to show how shell fishing can be linked to the identity of a place as part of the cultural landscape, where cultural (shell fishermen) and natural (*Ria Formosa*) heritage elements merge, seeing the shell fishing production place as a space with particular elements (*terroir*); shell fishermen as representatives of the local and authentic traditions through their crafts, arts and lifestyle; and shell fish products as an important element for the gastronomic heritage. Finally, it introduces existing studies exposing cases and examples of the transitory process in the case study, where development initiatives involving shell fishing and tourism in the *Ria Formosa* have already been discussed.

The overall aim of this section is to look at concepts, examples and context that contribute to answering the research questions and which address some of the points stressed in the relevance of the study.

### 2.1 Food and tourism: dynamics, influences and potential benefits

It is surprising that research on how food contributes to sustainable tourism is in general quite limited (Yeoman, I. *et al.*, 2015), given the important resource implication for a destination. Still, it is possible to find cases where food has shown its potential to contribute to the sustainable competitiveness of a destination (Rand and Heath, 2006) or where local food has an important role in providing authenticity to the visitors (Sims, 2009).

Food and tourism can also play a role in rural regeneration and agriculture diversification (Everett and Aitchison, 2008) and can help to connect producers and consumers, which might contribute to the development of the territory. Hall (2005) also noted several factors that tourism development can bring in order to achieve a certain sustainability degree of a food production place. Just to mention some examples, if there is more use of local renewable resources, economic leakage can be reduced. If there are new linkages and more efficient exchanges, trust can be built amongst local stakeholders whilst simultaneously attracting external resources to provide finance, skill and technology.

Here, tourism has the potential to “strengthen identities and regenerate local heritage”, in a context where local products, festivals, culinary and agriculture skills find in tourism an opportunity for their preservation (Everett & Aitchison, 2008).

If we zoom in to the local food producers to talk about sustainability, tourism has a lot of influence in providing alternative choices for their livelihoods and can have a multiplier effect on food producers. New opportunities for additional income through innovation and diversification by creating synergies between food and tourism are possible (Henderson, 2009). There are other economic returns of tourism and governments see it as a tool in rural development which can help to stimulate agrarian economies in danger of decline (Boyne *et al.*, 2003), protecting existing jobs and creating employment. These objectives correspond with those of sustainable tourism development policies as heightened food tourism in the countryside can favor local farming communities and small-scale ventures.

Advantages for food producers in developing tourism initiatives can be drawn from Hall, C. M. *et al.* (2003) and Hall and Sharples (2008). For instance, increasing exposure to consumers, brand awareness and loyalty, increasing the relationship with customers by showing them ‘behind the scenes’, additional outlet sales or education opportunities, are some examples to remark. On the other hand, there are also disadvantages related to costs and management time, capital required, safety and biosecurity or sometimes the market is not even the right one to apply such initiatives.

In some cases, place transformation may happen where production areas could be at the same time consumed as tourism spaces. Everett (2012) explores the transformation of small local food production places into spaces for new tourism experiences, revealing some of the dynamics, benefits challenges and characteristics that come with it. This matter has to be raised when the time of planning and discussion for new initiatives, as the usage of resources for one sector does not necessary bring benefits to the other one. Hence, this study will pay attention to how shared mix-used spaces are viewed by shellfish producers and tourism actors in the *Ria Formosa* to spot some challenges as well as opportunities.

Hjalager and Johansen (2013) interviewed food and the results demonstrated that even if tourism related activities can bring them alternative choices and connect them to visitors, not all the food producers are willing to take part in close collaborations with tourism agents as they can see this change as a threat for their livelihoods, especially in protected areas. They are mostly satisfied with their activity and don't feel the need to diversify their activity, since they are seen as food producers and not places for tourism consumption. As a result of this work, it is interesting to find out more about how shellfish producers and tourism actors look at these potential collaborations, how it is communicated and what the opportunities and challenges are to establish frameworks where food and tourism activities can be accommodated.

On some occasions, the relationship between local food and tourism is not successful. Even if it's true that it can be a driving force to generate new opportunities for many actors and places, tourism can bring tourists to places where they find themselves in a situation where hygiene and food security are poor, or they might find themselves in a place where the food is completely unknown and not promoted. This could lead to the failure of the food image and a step backwards towards the development of place image (Cohen and Avieli, 2004). Hence, having a minimum readiness before taking part in any food and tourism collaboration initiative should be studied and considered, if the aim is to provide benefits for both local food producers and tourism.

In general, the role of food in tourism studies has been linked to the concept of heritage due to its cultural value which has been used for different tourism purposes. It is part of the legacy of a place, which is linked to tangible and intangible assets that communities receive from the past, conserve in the present and carry to the future (Brulotte & Di Giovine, 2016).

## 2.2 Shell fishing as cultural and natural heritage

In the previous section I showed how tourism can contribute to food production places and what potential synergies or challenges could face both sectors. I have also introduced different concepts in which food, through their production places and food products, can contribute to the tourism sector with different assets that are linkable to authenticity, culture value, identity and landscapes.

For this study, shell fishing is the sector I will use to talk about three elements that are linked to cultural and natural heritage. First, shell fishing as *people*, in reference to the profession, considering elements such as know-how, arts, crafts, lifestyle; shell fishing as a *place*, where human-nature relations shape the environment, where the *terroir* takes place and influences the transformation of spaces into cultural landscapes; and shell fishing as a *product*, linked to the food itself but also as part of the gastronomy and culinary heritage with elements such as tastes, recipes and eating habits.

Within the *Ria Formosa Natural Park*, different economic activities and actors are placed, including resource users of the heritage which might be placed around shell fishing. It can be comprised for instance of the combination of lands and sea, plants, animals and water which together forms the ecosystem of the *Ria Formosa*. Human action has profoundly reshaped all these elements of nature, using some components that are closely linked to cultural heritage such as the buildings and engineering works, arts and crafts, languages and traditions (Lowenthal, 2005). Considering all these components, we can think that *shell fishing* and the *Ria Formosa Natural Park* are elements in the Algarve that hold an important part of the regional legacy and identity.

The shell fishing activity as a profession is linked to heritage elements such as the traditional arts and crafts i.e. tools to practice shell fishing (*faca de mariscar*) or arts to practice shell fishing according to the experts to avoid not harm the land (see figure 2), which have been and still are used in the shellfish production. Moreover, the *Ria Formosa* composes a *terroir* where the local communities have developed over the course of history a collective production method with a specific know-how (Vandecandelaere *et al.*, 2009). These elements are connected to the human activity in natural areas and can be considered as part of the shell fishing heritage.

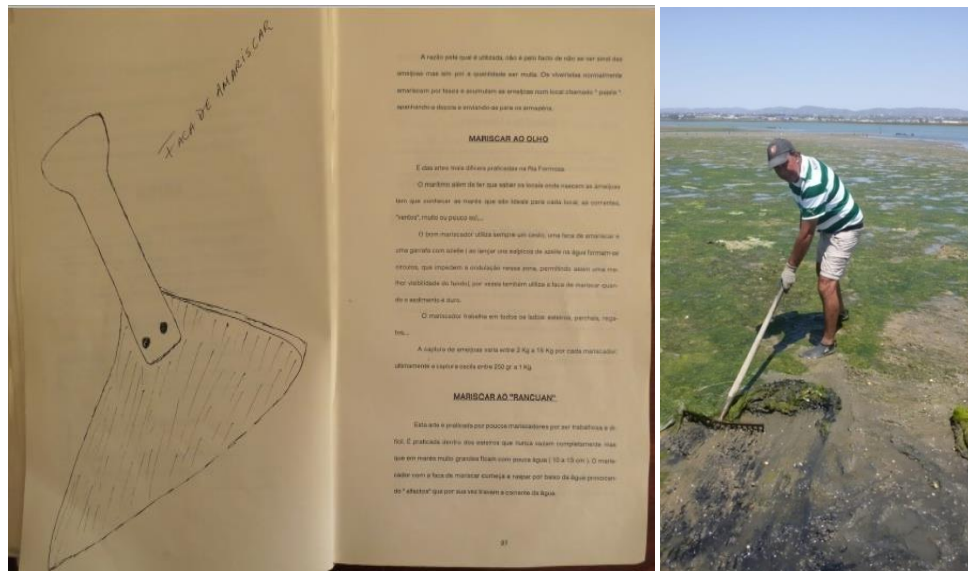


Figure 1. On the left, an illustration of a traditional *Faca de Mariscar* (shell fishing knife - craft) and shell fishing styles (arts) from Lourenço (1991). On the right, a shellfish farmer is “literally” shaping the landscape in the Ria Formosa. (Photos: own source)

Shellfish production places in the *Ria Formosa Natural Park* are more than a livelihood for the local community in the Algarve. They are also composing cultural landscapes, that have been evolving over the time and which still hold nowadays an active social role, linked to traditional lifestyles with still an evidence of this transition where the evolution process is still visible (Taylor & Lennon, 2001). Rössler (2006) also supports the idea that cultural landscapes are the connection between nature and culture, as well as tangible and intangible heritage, biological and cultural diversity, with a more recognition of the links between humankind and natural environment.

Moreover, the International Union for Conservation of Nature (IUCN) identified the benefits within protected landscapes/seascapes’ (UNESCO 2009, p. 23) as public good such as conserving nature and biodiversity; buffering more strictly controlled areas; conserving human history in structures and land use patterns; maintaining traditional ways of life; offering recreation and inspiration; providing education and understanding; and demonstrating durable systems of use in harmony with nature. Tourism being an important user of cultural landscapes, all these benefits should also be identified within their strategies when developing different initiatives around this particular heritage.

Apart from the shell fishing activity, lifestyle and the linkages with the production places, one more aspect which is important to local heritage is the shellfish food product as it relates to the gastronomy as an extension of the local culture. This study conforms a way of thinking to provide more socio cultural aspects of shellfish production places linked to their cultural and natural heritage where the relationship between food, place and identity can be explored, acknowledging that ‘gastronomy has become a significant source of identity formation in post-modern societies’ (Richards, 2002).

Regarding gastronomy, the tangible elements are composed by the ingredients and cooking equipment, while the intangible can be tastes, recipes and eating habits. All these elements are linked to cultural values to places and take part in constructing their identity, together with other important drivers such as language and religion (Timothy & Ron, 2013).

The Food and Agriculture Organization of the United Nations (FAO) report (Vandecandelaere *et al.*, 2009) acknowledges the importance of linking local stakeholders, places and agricultural and food products as a step forwards a sustainable rural development. They refer to origin-linked products as ‘a reflection of the unique combination of local natural resources (climate, soil, local animal breeds and plant species, traditional equipment etc.) and cultural assets (traditions, know-how and skills, often handed down from generation to generation) in a given territory, thus establishing specific links among the product, local stakeholders and the territory’ (Vandecandelaere *et al.*, 2009, pp xix).

FAO's aim for establishing such connections between *people, place and product* is based on the creation of value through origin-linked products associated to a specific place with specific qualities and reputation that have been built over time and represented through Geographical Indications (IG). What it is also interesting is that more consumers are concerned with the particular features of agricultural and food products in relation to their culture, identity and means of sustainable production (Vandecastelaere *et al.*, 2009).

This section illustrates how the shell fish sector is part of the coastal cultural and natural heritage— tangible and intangible - of the Algarve, supporting the idea that the combination of *people, place and product* hold enough importance and should be studied in how it contributes in different areas such as biodiversity preservation, cultural heritage protection, socio cultural development and rural poverty reduction. All these goals are also aligned with different types of tourism such as nature-based, cultural and food tourism formats which use the elements of *people, place and product* to promote places and create experiences and linkages between visitors and local communities.

Hence, using the concepts of *people* as part of the shell fishing profession and identity, involving the traditional arts, crafts in combination with the local knowledge; *place*, where the know-how is applied on a specific land and space, creating the *terroir* but also shaping cultural landscapes where shell fishing lifestyle can be perceived within this human-nature connection; and *product* as a food element from the area but also as part of the regional gastronomy as a representation of the culture, with local recipes, ingredients and eating habits, serve us to operationalize and set up the start of this research to look at shell fishing in the *Ria Formosa Natural Park* as part of the cultural and natural heritage in the Algarve.

### 2.3 Transition in the shell fishing sector and the *Ria Formosa Natural Park*

In recent years, attempts to develop different initiatives to improve the economic, environmental and social aspects of different activities around the *Ria Formosa* have been discussed. Bivalve exploitation is one of the most important economic resources for the local community, and the clams one of the main food ingredients for many Portuguese dishes, being that 90% of the clams consumed in Portugal are produced in the *Ria Formosa* (Guimarães, M. H. M. E. *et al.*, 2012, pp. 30).

There is no doubt that the *Ria Formosa Natural Park* where the historically shell fishing activity is located has a high natural and cultural heritage value as well as its beauty which attracts and makes possible the development of other economic activities, such as tourism in their nature-based or nautical formats, to mention some.

To illustrate another example, in 2012, the Framework for *Ria Formosa* Water Quality, Aquaculture, and Resource Development (FORWARD) provided a comprehensive assessment of the state and future of aquaculture. The study illustrated for instance, that in 2010 there were 1122 leases which involved a labor force of between 4000 and 6000 people. Considering that the combined population of the area (Faro, Olhão, and Tavira) is about 125 000, about 4% of the workforce might be directly employed in clam aquaculture, with the first sale revenue corresponding to 2.5-7.5% of the local GDP, depending on the landings estimate used. Adding the indirect job and activity created around the clam harvesting activity, the total number increases considerably.

Hence, special attention has been paid to developing new initiatives to renovate the clam sector. Strategies have been on the table in order to initiate and develop more food and tourism projects in the Algarve by using its distinctiveness and resources, with special emphasis on the *Ria Formosa*. Food plays an important role in the Algarve and the development of innovative tourism experiences around food productions has been also considered to think about a Regional Sea Cluster and to develop more coastal tourism initiatives, as shown in the study carried out by Gonçalves, A. *et al.* (2011)

Moreover, the FORWARD report recommended the implementation of different initiatives to provide added value to the clam sector in particular. The creation of a certified food label for clams as a PDO product, the reconsideration of the leasing division of the clam culture activity or the mechanization of the clam culture activity, are some examples, yet to be developed (Ferreira, J. G. *et al.*, 2012)

All these initiatives described in the paragraph above could have a direct relation to the tourism sector, transforming the shell fishing production places to an area of tourism activity and consumption and/or opening potential opportunities for other activities to be developed. This transition or transformation could also have an effect in the provision of cultural and natural heritage linked to the shellfish sector in the *Ria*.



### 3. Conceptual Framework

The concepts I have introduced in the literature review section are integrated in my conceptual framework as the theoretical background of my study.

Taking first the attributes and characteristics of shell fishing that can be linked to the cultural and natural heritage, the codes *people*, *place* and *product* are essential concepts for this study.

For *people*, the concepts that I used are related to the profession of shell fishing, as well as the knowledge in terms of arts and crafts. Education and characteristics are terms that helped me to find out more about the lifestyle and behavior of the shell fishermen. Moreover, different types of shellfish producers were identified i.e. shellfish farmer, shellfish harvester – licensed or informal - and shell fishing tourist. I looked through all the data to collect and profile better all these different characteristics to a typology of shellfish producers (more details in the finding section 5.1.1 *People*).

For *place*, I used different elements to look at the *Ria Formosa* as a cultural landscape by using my concepts around the physical description and livelihood. It is also combined with the theoretical concept of *terroir* which is studied through the shellfish production places in combination with the knowledge drawn from *people*. To provide more aspects linked to intangible heritage, place attachment as well as positive and negative feelings and perceptions of the *Ria Formosa* are captured.

Lastly, in terms of shell fishing as cultural and natural heritage, *product* is divided in different terms to capture its relation to the value, quality, different types of shellfish and gastronomy as part of the local identity.

Apart from all these concepts drawn from theory, I have also used two more categories to capture separately the views and opinions of shellfish producers and tourism actors for *people*, *place* and *product* and see how each group understands shell fishing as a cultural and natural heritage.

In terms of food production activities and tourism dynamics, the first section of the literature review has demonstrated different examples and cases of interactions and synergies between both activities. I used here the concept of dynamics, to look at interactions between shell fishing and tourism as well as impacts to see how they affect/contribute to each other and their collaborations, to look at the different levels of synergies and to study under which conditions are these collaborations developed.

On one side, shell fishing in the *Ria Formosa Natural Park* is an attractive activity for tourism to portray authenticity, to offer different activities that links visitors to the local culture. The lifestyle that shell fishermen are portraying; the arts and the crafts, together with the know-how, creates this particular *terroir* that offers a characteristic cultural landscape of the *Ria Formosa*, highly used in tourism to promote the place and create activities and experiences around it. Moreover, food products play an important role in tourism. They represent the identity of a place through the local gastronomy where particular products are used in different recipes.

On the other side of the dynamics, tourism brings opportunities for food production places to bring visitors closer to their activities, to promote their products and become more visible. The increased presence of tourism can also influence food producers where they can see potential opportunities to develop collaborations related to food tourism activities.

One last concept which is more related to the transition/transformation of the *Ria Formosa* relates to the future concept I used for this study. In this sense, views and opinions were captured to see how the transition of the shellfish sector was understood by shellfish and tourism actors, where tourism development in the *Ria Formosa* is also part of it. The aim was not to answer a particular research question but to provide insights and context which helped to better build-up the arguments and content of the dynamics between the two sectors.

## 4. Methodology

For this study, I want to capture how shell fishing is understood through the concepts *people, place and product* as part of the cultural and natural heritage in the Algarve and also the dynamics between shell fishing and tourism.

Given the multiple subjects involved in tourism, where economy, geography and sociology are the predominant sciences, research can be very diverse with lots of different approaches involving quantitative, qualitative or mixed methods. For this particular case, I used qualitative methods through an ethnography research as an exploratory approach to this particular phenomenon. Methods for this case involved semi-structured interviews, observations combined with visual data and finally graphic elicitation stimuli as a supporting method for interviews (see 4.1 data collection methods and research setting).

This focus is used on exploring and understanding the different views and opinions of shellfish producers and tourism actors and answers the research questions of this study. Moreover, having this approach allows me to stay in close collaboration with the participants and enable them to tell their stories. Through these stories, the participant describes their views of reality and allows me to understand better their actions and context. The aim is to catch each participant's perspective as their meaning can reflect multiple realities in understanding the particular case study which could be interpreted as the truth (Baxter & Jack, 2008).

Hence, for this case I immersed myself in the Algarve to connect with the actors that are related to the shell fishing activity as well as tourism actors, to capture their discourses about shell fishing and tourism through different interviews and conversations, as well as personal observations in the field.

### 4.1 Data collection methods and research setting

#### 4.1.1 Sampling

The sample was composed by 11 representatives from the shellfish production sector - such as clam harvesters, clam farmers, oyster farmers and members of the shellfish producers association; and 10 participants related to the tourism activity - public and private - directly or indirectly linked to the *Ria Formosa Natural Park* where shellfish production takes place such as food tourism agents, boat tours skippers and directors or participants from public administration from culture, tourism or *Ria Formosa* place management. (see Table 1). The aim of the methodology design was to acquire enough data from these perspectives to understand how images about cultural and natural heritage related to the shell fishing activity were perceived; and how the two sectors related to each other and what dynamics appear by looking at the interaction and collaboration levels. I attempted to contact participants with different socio-demographic characteristics and tried to balance the representation for each location.

To increase the data collection efficiency, desk research was done in advance and a preliminary list of potential organizations and contacts was created. This second approach was designed to reach participants from established organizations representing the shellfish sector i.e. *Cooperativa Formosa*, *VIVMAR* or *GAL Sotavento*, or the tourism sector i.e. *Região de Turismo do Algarve*. They were contacted in advance via e-mail and telephoned to arrange meetings to carry out interviews as well as to observe their working environments, in particular with the shellfish producers' group. The second strategy to contact participants was done by looking at specific places such as fish markets, harbors and shellfish stores in different locations where most actors were concentrated (see 4.1.5 location). Apart from purposive sampling, snow-ball sampling technique was used to increase the chances of contacting more relevant participants.

Table 1. Overview of participants

Interviewee type:	Gender:	Age:	Location:
Shellfish producer: 11	16 Males 7 Females	Youngest: 29 Oldest: 79 Mean: 50	Faro: 8 Olhão: 7 Fuseta: 2 Tavira: 4
Tourism development related actors: 10			

Name	Role	Gender	Age	Location
1. PC	Shellfish producer (shellfish harvester) Treasurer of VIVMAR* (Association of Shellfish Producers)	Male	54	Faro
2. VL	Shellfish producer (shellfish harvester) President of VIVMAR (Association of Shellfish Producers) Owner O Chavalar Restaurant	Male	63	Faro
3. OS	Shellfish producer (shellfish harvester)	Male	67	Faro
4. JM	Shellfish producer (shellfish farmer at shellfish production company)	Male	60	Olhão
5. JQ	Sociologist. Head of Culture – Municipality of Tavira. Associate of Mediterranean Diet Candidature (UNESCO)	Male	66	Tavira
6. JB	Shellfish producer (shellfish harvester) Market seller	Male	52	Tavira
7. IR	Director of Taste Algarve (Food Tourism)	Female	40	Tavira
8. AG	CEO Eating Algarve Food Tours (Food Tourism)	Male	34	Faro
9. RS	CEO Rota das Ilhas (Boat tours)	Male	33	Olhão
10. JA	Executive Director Tertúlia Algarvia	Male	48	Faro
11. AS	Former Shellfish harvester Skipper (Boat tours)	Male	48	Olhão
12. AX	Worker at PNRF**	Female	50	Olhão
13. NS	Shellfish producer (shellfish harvester) Skipper (Boat tours)	Male	41	Faro
14. CS	Director Moinho des Ilhéus (Oyster Farmer)	Female	54	Fuseta
15. CSi	Entrepreneur at Quatro Aguas (Oyster Farmer)	Female	29	Tavira
16. JD	Clam farmer	Male	79	Fuseta
17. RM	Director - GAL Sotavento (public administration for development)	Female	39	Olhão
18. JM/MR	President and Director Cooperativa Formosa and Depuration Centre (oyster farmers)	Male/Female	50/47	Olhão
19.RP	Clam farmer	Male	69	Olhão
20. SM	Worker at promotion – RTA*** (public - tourism)	Female	45	Faro
21. AS/LS	Director RTA / Technician promotion (public – tourism)	Male/Male	38/48	Faro

\*VIVMAR Associação de Mariscadores e Viveristas da Ria Formosa

\*\*PNRF Parque Natural Ria Formosa

\*\*\*RTA Região de Turismo do Algarve

#### 4.1.2 Semi-structured Interviews

Interviews are an excellent tool to capture the diversity of descriptions and interpretations that people have about their reality. The interviews in this research ought to capture multiple realities about shell fishing and tourism in the *Ria Formosa Natural Park* and how are they related. For this study, interviewing was the main data collection method to capture “people’s knowledge, views, understandings, interpretations, experiences, and interactions (Mason, 2002)



Using interviews as a qualitative tool allowed me to capture with clarity the human dimensions of the society, their consequences and implications. For this case, I captured narratives of the shellfish and tourism sector about the shell fishing activity and its relation to tourism. This is done by conceptualizing shell fishing as part of cultural and natural heritage in the area of the *Ria Formosa Natural Park* and by looking at the different dynamics that the literature review has demonstrated which I conceptualized for this study. Moreover, interviews provided me a deeper immersion in the context and more value in the shellfish and tourism domain where several realities and contexts are more and more diverse.

Cohen, Manion and Morrison (2007) cited various authors and offered a complete picture of the interviews as a qualitative tool to be used, describing different types, such as guided interviews, semi-structured interviews, informal conversations, etc. For this research, semi-structured interviews with open questions were used to stimulate the conversation but also to provide an element of guidance for the interviewer. In doing so;

- Questions were designed and defined in advance, which avoided interruptions and allowed for more room in natural conversation and for a sense of flow;
- All the interviewees answered the same questions in the same order;
- As all the interviewees answered the same questions, it was easier for the researcher to compare answers;
- Data from each interviewee in relation to the topics were complete;
- It reduced the effects and influence of the interviewer when more interviews were carried out;
- It facilitated the organization and analysis of the data.

In the interviews, both the interviewer and the interviewee were understood to use language to present themselves and the people and events about which they spoke in a certain way. It was not assumed that the researcher and participant necessarily mean the same thing when using the same words i.e. conceptualization and understanding of heritage. In this context words were not assumed to speak for themselves. Thus, I was in some occasions needed to ask clarifying questions about the meaning the participant intended to convey through the use of specific terms (Starks and Trinidad, 2007) as for instance, specific names for traditional arts and crafts, shellfish species or areas where shell fishing was practiced.

Before every interview, I explained the purpose for the data collected to the interviewees and I facilitated them a consent form to be signed and be able to use the data. The interviews were designed with opening questions to initiate the conversations with the participants, asking about simple questions of their everyday life and routine, followed by the questions and topics this research in particular was aiming to understand (details about the interview guide see Appendix 1).

Data from interviews was recorded and notes and comments were written down. Moreover, through interviews, access to working places was possible to carry on additional observations. Given the circumstances of the language, the interview guide was in both Portuguese and English to provide more credibility and avoid misunderstandings. Templates and guides were printed and the data was afterwards digitalized.

#### **4.1.3 Observations and visual data**

During the observations, the main purpose was to see in a natural occurring environment the different interactions, behaviors of the shellfish producers and other actors practicing shell fishing as well as all different kind of tourism related activities that were placed in the *Ria Formosa Natural Park*.

As a method for this research, observations were important as little was known about the phenomena prior to the research and thus it was used as a way to provide more data. In particular, I took photos to support data from interviews in such a case, the researcher “establishes and sustains a many-sided and relatively long-term relationship with a human association in its natural setting for the purpose of developing a scientific understanding of that association” (Lofland & Lofland, 1995, in Boeije, 2010:59).

Visual data is related to the recording, analysis and communication of social life through photographs, film and video (Harper, 2007, in Boeije, 2010:65). In this case, visual data was generated for the research and by the researcher. In anthropology, it has been used to capture cultural phenomena and illustrate cultural events and in sociology, to show work, social class, social problems and so on (Harper, 2007 in Boeije 2010:65). However, the quality of scientific research in using visual data is of concern, being easy to manipulate, whilst they can also only provide a partial view of reality. For this case, visual data is combined with observations and together, they composed a supporting method to triangulate with the interview data as a my main data source.

Whenever different discourses appeared during the interviews and conversations with the participants, this data was also used and triangulated to specifically observe places where potentially these practices were possible to observe. For instance, observations were carried out in natural banks where shell fishing was practiced by different types of users, after gathering views and opinions of people complaining about tourists and poachers shell fishing there. This is an example that I used for observing dynamics and interactions, as well as to see how they could be linked to different aspects of shell fishing as heritage.

Examples are deeply explained in the findings section of this research, but to give another, the observations on how boat tours use of the natural area and how they interact with shellfish producers was triangulated with interview data, which helped to confirm or provide more evidence on one of the practices in the natural park. All these observations were also captured and used in this research through mainly visual support. In this sense, this method employed, could be considered an hybrid between observations and visual data methods.

#### 4.1.4 Graphic elicitation stimuli

The last method used in this research, was graphic elicitation stimuli. Complementary to the other methods, graphic elicitation stimuli are tools employed during interviews with the aim to elicit ideas, comments and discussions that would otherwise remain unarticulated (Gaskell, 2000). It is typically composed by physical specimens, maps, drawings, photographs and video clips (Crilly, Blackwell & Clarkson, 2006).

For this specific research, tourism and cultural promotion materials where shellfish producers or cultural landscapes were portrayed (see *Appendix III* for visual materials used for graphic elicitation stimuli), was used, with pictures being the main resource used in this research. Images helped to stimulate interviewees in their conversations and reflections when conducting interviews and to avoid misunderstandings or “I don’t know situations”. Hence, the stimulus materials were focused on the use of photos, collected from existing sources. Regardless of the source of the images, photography stills provoke different reactions into the participants consciousness rather than just using words-alone, as Harper (2002) suggests.

In the case of the research, the brochure materials were first gathered. These were then used during the interviews, during the phase in interviews where conversations and questions regarding the images and the use of the images of the shell fishing activity were used to portray the different elements that are linked to cultural and natural heritage in the *Ria Formosa* with the shell fishing. This helped in the sense of enhanced visualization and reflection on the role shellfish producers have in composing these images and also opened the possibility to look for meaningful adjectives, as well as to see what other communication and collaboration dynamics were established in providing these materials.

It was useful as well to illustrate or represent situations where interactions or certain dynamics were happening in order to visualize it and stimulate the conversation. During the transcription of interview data, the use of brochures was written down in the specific moment where they were shown with a “showing brochure” comment in brackets.

#### 4.1.5 Location

The Ria Formosa is a dynamic and complex coastal system, located in the Algarve province of southern Portugal. With 55 km long, it occupies an area of 184 km<sup>2</sup> with two peninsulas (Cacela and Ancao) and five islands (Culatra, Barreta, Armona, Tavira e Cabanas) form the land boundaries, which enclose a shallow lagoon system. It is also a system with important natural resources that provides conditions suitable for several activities, such as tourism, ecotourism, aquaculture, fisheries, nature conservation, effluent discharges, navigation and port activities, salt extraction and sediment mining among others (Ceia *et al.*, 2010).

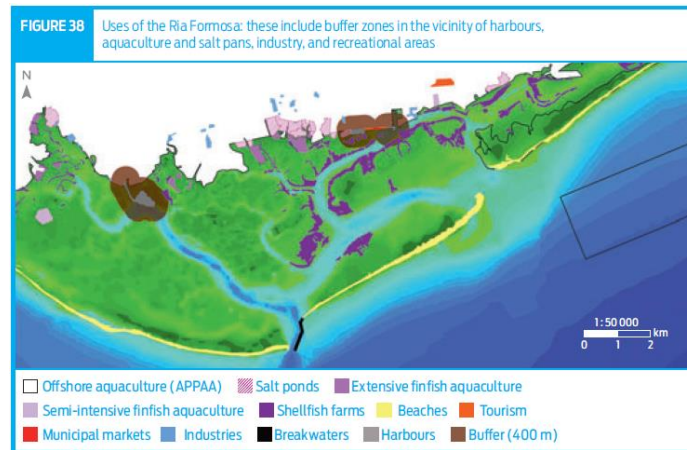


Figure 2. Image of different economic uses of the Ria Formosa (Ferreira, J. G. *et al.*, 2012 pp.69)

Looking at the participants targeted for this research, i.e. clam fishermen associations, oyster farms, tourism operators offices, policy makers but also places where observations of festivals, events and shellfish production places are likely to find, four locations - Faro, Olhão, Fuseta and Tavira – were selected especially for their strong connection to the shellfish production in the Algarve. This increased the chances to connect with shellfish producers and other related stakeholders in the area. Although, geo location was open to flexible events or opportunities that arose during the fieldwork as for instance the visit to *Moinho dos Ilhéus* in Livramento (between Fuseta and Tavira).



Figure 3. Location of the research (source: Algarve.pt)

## 4.2 Data Analysis

For this study, a discourse analysis approach was used in the data analysis (to look at knowledge, meanings, identities and social goods that were constructed through narratives and language-in-use expressions (Starks and Trinidad, 2007). In tourism studies, discourse analysis can be a good mean of critical investigation when the research is faced with qualitative or textual forms of data, such as written documents, or visual materials such as photographs and brochures. Such data is often representative of how a group of people have made sense of and reflected on their own world and that of others (Hannam and Knox, 2005).

Language both mediates and constructs our understanding of reality. It also defines the social roles that are available to individuals and serves as the primary means through which they enact their identities. Careful analysis of language, using what Gee (2005) has described as the seven “building tasks” of language (significance, activities, identities, relationships, politics, connections, and sign systems and knowledge), can shed light on the creation and maintenance of social norms, the construction of personal and group identities, and the negotiation of social and political interaction.

The next step was then to analyze and build-up views according to the research aim throughout the research questions. To do it so, the data from interviews was transcribed and digitalized in Portuguese by using ATLAS.ti. I used Portuguese for the data collection and then I translated the concepts and data accordingly for the elaboration of his report. Dual quotations in Portuguese-English were used to provide additional insights for the participants.

By using textual analysis (Hannam and Knox, 2005), the data was first decontextualized from the original context of individual cases and codes were assigned according to units of meaning in the text. Afterwards, the codes were examined and recontextualized by looking at patterns and reintegrated, organized and reduced the data around central themes and relationships drawn across all the cases and narratives (Starks and Trinidad, 2007).

The coding process which started with open coding was alternated with selective and axial coding to find meanings and shared concepts (Boeije, 2010). Inductive coding was used in the beginning to get a feeling of the interview data, in combination with some deductive codes that were used as guidelines to organize the content such as lifestyle and profession to look for content regarding *people*, physical or shellfish farms for *place* or gastronomy and shellfish product for *product*, to mention some examples drawn from literature and the conceptual framework. This resulted in a 'coding scheme' (Boeije, 2010), which helped to answer the research questions and draw conclusions (full coding scheme see Appendix II).

Visual material analysis was also part of this phase of the research. By looking at different publicity and promotional materials, it was possible to triangulate and better capture the discourse about the different topics that were discussed, i.e. Shellfish as gastronomy, *Ria Formosa's* landscape, etc. It was also used to analyze how this information was provided, in terms of images, language and concepts. Visual material analysis provided a stronger context regarding how these themes and images were created in portraying, for instance, shell fishing as a cultural and traditional activity in the *Ria Formosa*.

This research explored the discourses shellfish producers and tourism actors use to construct their experience of working in the *Ria Formosa Natural park* and how this related to the image of shell fishing as part of the heritage in the area and how the multi-use spaces affect it.

#### 4.3 The role of the researcher

Food plays an important role in every place. Its close-connection with the tourism sector, the local culture and its value as an asset to build strategies for local and regional development initiatives, attributes food certain qualities which turn to be for me an engaging factor as a case study. However, it is true that not all the countries face the same scenario in terms of food when is related to culture and tourism and therefore, its dynamics and influences can derive a big challenge for all the agents involved in the management of this multidimensional resource. For these main reasons, I have selected the topic where food and tourism are involved to develop my thesis and broaden my knowledge.

In general terms, as a researcher, I have used an ethnographic approach. Firstly, I consider myself an active character that needs to get in real contact with the research case, feel and sense the food, the place and the culture around. An exploratory approach such as ethnography with qualitative methods allows me to do it according to my preferences. It provides me a deep understanding and connection with people and food in relation with landscape, territory, and it gives me the chance to see new places.

In regards of my positionality, the end of my research would be most of the time, to understand and preserve cultural and natural heritage linked to food and tourism, with a special focus on the socio-cultural context but without leaving the economic and political completely out of the scope. As I said, I see myself mainly as a food tourism ethnographer as I want to build as many bridges as possible between people and cultures and develop rural areas, and food as a soft power and vehicle in tourism, has the properties to do so.

#### 4.4 Credibility and dependability

According to Boeije (2010), both reliability and validity (or credibility and dependability for qualitative studies) are not easy to ensure in qualitative research, especially when different methods are employed as this case presents. Still, being transparent about each step of the research process can contribute positively to it.

In qualitative research, the researcher is the “instrument” (Patton, 2002) to ensure credibility. My work as ethnographer has been done with a prolonged engagement in the Algarve where my constant presence as a researcher was more accepted which helped to reduce my distortions (Thyer, 2010). This long engagement also helped me to test my biases and perceptions as well as those from my respondents. Moreover, credibility has been reinforced with a purposive sampling technique where my selected participants were governed by insights about what it was important and related to my research questions.

Regarding the credibility of the coding process, the data was grouped together into different meanings with consistency and finally used for the main concepts linked to the theoretical framework. This was also possible with a good familiarity of the data which allowed me to see the big picture of my research aim through all the narratives captured from the participants.

Ensuring credibility has been reinforced by triangulating data through different methods. In this sense, interview data from respondents was also supported by observations and visual materials, which helped to develop the findings and to build-up stronger conclusions.

Regarding dependability, it has been more challenging in this study and it can be in general in qualitative studies. Still, there are ways that can help me at least to how I used a consistent method through the use of computer software such as ATLAS.ti. This is not to be more rigorous, but the narratives and the data were used in a systematic way (Thyer, 2010).

Another possibility to enhance my dependability could be assessed through my consistent analysis method. I have used discourse analysis to look at meanings, views, knowledge and opinions of my participants and this analysis approach has been used in every section in order to come with the findings.

Still, there are a lot of other ways where my procedural dependability can be enhanced. Since my research has not yet been reviewed by anyone else, and audit trail has not been done (Thyer, 2010). The interviews records, transcripts and coding scheme in ATLAS.ti are available for a peer review in the case this needs to be done.

Even though I have used different methods to ensure credibility and dependability, I am still aware that as the “instrument” of my research, my biases, personal views and understanding of the case, not in collecting the data but especially in constructing and assembling it, have played an important role on the final outcome of this study.

#### 4.5 Limitations

In the first place, the limitations of this research can be found in the location of the case. This study has been carried out in a particular place, with particular natural and cultural conditions and the outcomes and findings are restricted to the *Ria Formosa Natural Park*. Still, some dynamics can be interesting to explore in similar areas where both, shell fishing and tourism sectors merge.

Moreover, this study is also limited by the period of time within which it has been produced, as the data collection was carried out during low season. Perhaps, carrying it out during peak, summer season, could have had another influence when it came to observing the tourism and shell fishing dynamics.

One last limitation relates to the participants. The low representation of informal shellfish harvesters and the absence of shell fishing tourists as participants of the research can also limit the information that is provided to have a better image of these two groups (see *Table 1 Overview of participants*). They were not included in the proposal and the typology appeared *a posteriori* as part of the data. Almost all shellfish producers who were interviewed were licensed shellfish harvesters or shellfish farmers. Still, within the discourses from both shellfish producers and tourism actors, it was possible to capture the images of informal shellfish harvesters and shell fishing tourists and raise awareness of their presence. This research acknowledges the need for carrying out more research on these particular groups to find out more about their socioeconomic and cultural aspects as well as opinions and views of their shell fishing practices and their position within the *Ria Formosa Natural Park* place.



## 5. Findings

In order to develop this research, findings and preliminary discussion from the interviews are organized into different sub sections, according to each of the research questions to illustrate the different views and opinions of the research participants. Supporting images taken during field observations are used to provide a better visualization of the narratives.

### 5.1 Perceptions of the shell fishing activity in the *Ria Formosa Natural Park* in sustaining cultural and natural heritage

The aim of this section is to see and develop how shellfish producers and tourism actors perceive the shell fishing activity and how it is maintaining and related to cultural and natural heritage. By looking at the components – *people, place and product* - from the conceptual framework in the context of the *Ria Formosa Natural Park* ,I can provide a description of themes, narratives and characteristics of the activity and look for linkages between them.

Moreover, a typology for the shellfish producers and other actors involved in shell fishing is introduced, which is built-up from the interview data coming in particular from the *people* section. Due to the heterogeneous component found in the narratives of participants when describing *people* involved in the shell fishing activity, it might be interesting to profile what different shellfish producers and actors are involved in the shell-fishing activity in relation to tourism and how are they connected. Cvitanovic *et al.* (2018) used this approach also in a fishing community within a Marine Protected Area to break down the local community in order to understand better the different sub groups in place. This typology aims not only to provide more understanding of the perceptions about *people*, but also it serves as a baseline for the other sub sections in the findings to analyze the dynamics and collaborations with tourism and to provide conclusions and recommendations for further research or action. It is important to mention that this typology is not a full generalization but it should help to understand the social complexity of actors involved in the shell fishing activity in the *Ria Formosa Natural Park* and to identify them in relation to the local culture and identity.

Following *people*, this section will also gather views on the perception of *place* to look at how natural heritage is perceived as a space where different economic activities are happening. Apart from a livelihood for the communities, either through shell fishing or tourism-related activities and a place identity with a specific *terroir*, the *Ria Formosa Natural Park* is also a place for fish breeding, a unique wetland ecosystem under Nature 2000 and RAMSAR convention with a high biodiversity value. Hence, knowing how the place is described and what feelings, attachment and stories are explained about the *Ria Formosa Natural Park*, can help in understanding how natural and cultural heritage is perceived by the main stakeholders involved in this research.

The last fragment is about the *product*. Shellfish in the Algarve is a big part of the gastronomy and culinary heritage, but also has a high commercial value. Moreover, there are specific characteristics, reputations and quality that identify the product with the region of the Algarve.

#### 5.1.1 People

To look at *people*, I want to study how shellfish producers and tourism actors perceive shell fishing as an activity that is placed in the *Ria Formosa* and how do they understand it in relation to different elements that can be linked to the cultural and natural heritage in the Algarve. In particular, we look at the profession of being shell fishermen where arts, crafts and knowledge come in together.

The aim is to see how this activity is perceived by two different groups of actors and how do they related to what it can be part of the heritage place in the *Ria Formosa* where to find similarities and differences. The concepts used for *people* basic elements of the shellfish producers' lifestyle and identity which are also seen in tourism as authentic and traditional and used for promotion. Here, I want to see how this identity is described and start building up the ways in which both shell fishing and tourism can be related.

Moreover, as mentioned in the introduction of this section, it is interesting to see how through the descriptions of each of the research participants when comes to talking about *people* related to the shell fishing activity, different profiles of seafood producers can be perceived.

Hence, different types of shellfish producers were taken into consideration from the views and opinions in regards of *people* from 11 shellfish producers and 10 tourism actors (see *table 1*). Their discourses when talking about *people* were already guiding me in the idea of designing a typology of shellfish producers and actors involved in the shell fishing activity (see *table 2*). The sample composing the shellfish producers represented mainly the licensed shellfish harvester and the shellfish farmer. Yet, the other types - informal shellfish harvesters and shell fishing tourists - were appearing constantly amongst all participants, which encouraged to include them and present the following design for the different types of actors practicing shell fishing in the *Ria Formosa*:

Table2. Overview of different types of actors practicing shell fishing

Level of engagement in the shellfish sector	High	Licensed : shellfish harvester	Shellfish farmer
	Low	Informal shellfish harvester	Shellfish tourist
		Level of engagement in the tourism sector	
		Low	High

A brief clarification of the typology is important for a better guidance and understanding, taking into consideration people's origin, working place and motivation for shell fishing as important components. The following typologies are presented:

- Licensed shellfish harvester. Local resident with license to work on natural banks and sell shellfish.
- Shellfish farmer. Local or foreign entrepreneur with a land lease to cultivate shellfish in a more intense way.
- Informal shellfish harvester. Local resident with no license to sell shellfish.
- Shell fishing tourist. Non local resident, doing shell fishing for own-consumption.

By using this typology for different shellfish producer profiles, it should be possible to build-up stronger arguments to answer the research questions, as it helps to:

- Gain a better understanding of the composition of the actors who are involved in the shell fishing activity;
- Understand who is involved in the different dynamics between the shellfish activity and tourism sector in the *Ria Formosa Natural Park*;
- See who provides and sustains cultural heritage and how it is reflected;
- Analyze different relations with the natural heritage (*place*);
- Better understand why there is a lack of unity within the sector;
- Look for specific initiatives for capacity building, collaborations and governance planning and development.

Moreover, in order to categorize the different profiles, a level of engagement with the formal shellfish sector and the tourism sector is created which also will help to visualize the sections about dynamics, collaborations and future opportunities. This criteria is as follows:

Criteria for engagement in the shellfish sector:

- Licenses, permits, belonging to association and cooperatives, legalization, cooperation initiatives.

Criteria for engagement in the tourism sector:

- Relation with tourism agents, participation in tourism related activities, structures, resources.

Some interesting aspects that inspired me to build up the typology of shellfish producers were the differences within the shellfish producers' sample that participated in my study. I saw shellfish harvesters different from shellfish farmers (already different types but also in their daily routines, at shellfish farmers hold more structure and they have a permanent place to work on. I also noticed through observations that oysters and clams are not produced in the same way and oysters are becoming the new shellfish farms. Together with the appearance of tourist practicing shell fishing and the informal activity that is also placed and acknowledge by everybody in the sector, I found interesting and relevant to know more about the diversity of who is practicing shell fishing in *Ria Formosa*. I supported my findings with observations and looked for relevant details in my data to enhance this proposal. Again, this is not a generalization as I have already shown in my limitations that not all the views of this typology were captured but still, an idea to consider when understanding the interactions with tourism and perhaps carry on further exploration.

The typology is also interesting to not only to see who is involved but also how are they involved. Following the same structure, the coming sections will describe the narratives of the participants in a general context and see how each of these categories of our typology are framed and perceived by each of our sample groups.

#### **5.1.1.1 Perceptions of shellfish producers by tourism actors**

Drawing from the data, a shared perception amongst the tourism actors group is that shell fishing is indeed considered a traditional economic activity of the Algarve, with hundreds of years of history and a strong intimate link to the local community, culture and diet. An authentic activity of the *Ria Formosa* – '*A Nossa actividade*' (Our activity), that has been passed on generation by generation, has been and still is, a livelihood for a number of families. Shell fishing can be an opportunistic activity, where most of the action happens on the natural banks, where the caught of the day is not taken for granted. Motivations to practice shell fishing can differ - from collecting juvenile seeds to be planted in a private concession to just being opportunistic and get your catch of the day to either earn some money via formal or informal ways, or simply prepare a good meal.

If we zoom in, the 'actors' or shell fishermen are described in general as individualistic, with a personal shared connection with the natural working place and with a sense of feeling "free" in the outdoors. They are considered in general, as working within an old sector, with low education and a traditional mindset.

Following this contextual summary of views, it is good to take a closer look at the different profiles that had been appearing through the analysis, to look into detail at the characteristics, the profession and how it is reflected in the cultural and natural heritage of the *Ria Formosa* Natural Park.

#### **Licensed shellfish harvesters**

Traditional. If there is a word to define this group, this might be the one. Clam harvesters who have been practicing shell fishing from generation to generation in the waters of the *Ria Formosa Natural Park* were and still are considered an important part of the community. However, somehow they live in a "ghetto", since they still live in old areas within which fishermen communities resided before the development of cities such as Faro or Olhão. Moreover, they practice a very special commercial activity close to the sea that is difficult to do and not everyone wants to do it. As a result, they are considered narrow minded communities. An example from one of the respondents is the case of Ilha de Culatra, a fishermen community with great relevance in shell fishing. This place is known for being sedentary, with traditional values on gender roles – "*they go from work to the bar<sup>2</sup>, and vice versa, until is it gets dark so they can sleep with their wives*". Moreover, Culatra even has its own particular culture and language that even the people from Lisbon for instance, cannot understand. This example can be considered one of the extreme examples but still reflects the point that traditional clam harvesters follow a certain routine and behavior, linked to the hard work in the sea.

As a profession, they are considered to be unique, where the arts of shell fishing, the crafts and the local knowledge have been transmitted from generation to generation in a traditional environment. Nowadays, it is seen limited to old traditions, with less clam harvesters practicing the arts and using the shell fishing tools, as some of them are not efficient anymore, but still, represents an important component of the natural and (living) cultural heritage of the natural area

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<sup>2</sup>According to the interviewee, a native from Culatra, the place has one of the higher ratio of beer consumption per capita in Portugal.



Even though the description of an artisanal job in an outstanding scenario could be romantic or ideal, the perceptions of tourism actors also show us other interesting points. Their profession, regardless of its characteristics that can be to the “authentic”, where it is possible to see a shell fisherman, bent over and collecting the shellfish with their bare hands, is considered hard and limited by the natural timings of the tides, climate and the ‘muddy’ conditions of the landscape.

These harsh conditions can also influence the valorization of their profession, which has not been considered as they are not “trendy” like other professions that are coming back, as for instance is happening in agriculture. It could be because shell fishing is associated to a poor social status or because the working conditions are hard. JA, describes it well during the interview:

*Some release from the sector is missing, because other initiatives between tourism and agriculture were already done long time ago with local development organizations like IN LOCO, through many years. I think that this link was missing for the associations and activities in the Ria Formosa [...] the shellfish producer is not cool, the valorization of these professions was not well done.*

*Falta alguma libertação por falta do setor, porque com as iniciativas de terra com o turismo, foram feitas há muito tempo com associações de desenvolvimento local, como IN LOCO, durante anos. Eu acho que faltou em su momento esa ligação para as associações e as actividades da Ria Formosa [...] o mariscador, não é cool, a valorização de estas profissões não fue bem feito.*

This valorization work is yet to come and a minimum critical mass of people is needed to get started. However, tourism actors are aware of the importance of preserving this activity because of its cultural value, and they acknowledge that clam harvesters are unprotected, not safeguarded and literally “used” to represent the *Ria Formosa*. This even makes some tourism agents upset as this unfair situation should come to an end, however clam harvesters don’t have the knowledge, structure or education in this area to take action.

### **Shellfish farmers**

The ‘*Viveristas*’ or shellfish farmers are considered to be linked to a more recent activity, through an intense production or cultivation place, related to land tenure and even in some cases, having employees. These aspects provide them with an image of being professionals. This professionalism seems to be good enough for tourism actors to find the right partners to elaborate tourism related activities linked to nature contemplation, local culture and gastronomy. Still, this is not possible with all the shellfish farmers as not all have the same vision or willingness, and they just want to be fully dedicated to their economic activity. Another impediment comes from the need of passing through the bivalves depuration centre to ensure the quality and safety of their products, which limits the potential activities they could offer to tourists. This process has been in the shellfish production system since 2004 when the EU Parliament approved new regulations to control animal origin food products, including shellfish in the Ria Formosa. It has been part of a set of good practices that the *Instituto Português do Mar e da Atmosfera* - IPMA (Portuguese Institute of Sea and Atmosphere) set in order to provide a certain code of practices to ensure quality and safety of shellfish production and consumption (IPMA, 2019).

Shellfish farmers host great potential to be the nexus of what it could be a valorization process of the shell fishing sector, as part of the culture and natural heritage of the Algarve and little by little they are developing more initiatives. They can play a key role in bringing closer, for instance, the tourist with an interest in knowing more about the shell fishing activity. However, it is widely spread in the perceptions that a shellfish farmer is a food producer and that they should not stray from this, or be (ab)used as an attraction or become too touristy. Indeed, it could have a role in bridging certain gaps to portray the local culture. As IR highlights part of a conversation with a shellfish farmer who works with in providing tourism experiences:

*My business is to be a shellfish farmer and not to bring tourist to my shellfish farm. I want to do this activity, but always safeguarding the activity of the shellfish farm because I know this is our activity.*

*O meu negocio é ser viverista, não é trazer os turistas no viveiro, Eu quero fazer esa actividade, mas sempre salvaguardando a actividade do viveiro porque eu sei que issa é a nossa actividade.*

Shellfish farmers are seen as the ones holding more structure, power and the best working conditions, which have been improving throughout the years. One of the actors was even refereeing to the Mayor of one location being the owner of a shellfish production place, as a way of showing a social status.

Apart from this general context of the shellfish farmers, interesting findings have shown even a sub categorization of this group, composed by French oyster producers, young entrepreneurs and people coming from completely different sectors. I call this the *new wave*.

On one side, the French oyster farmers are seen as the big investors of the sector, transforming traditional clam production places to oyster production places. They hold economic power to skip the leasing processes and directly “rent” some of the land to old clam farmers. They have a big impact on transforming the landscape with more oysters’ beds and influencing the ecosystem with foreign shellfish species. “*They are like invaders that are using the natural resources for their own market*”, mentioned CS during the interview. This could not only have major consequences on the ecosystem, affecting the biodiversity and the landscapes, but it could also lead to a sector transformation where new users could also influence the local market and shellfish consumption patterns, bringing new food products on the table.

With some differences compared to the French oyster producers, the young entrepreneurs, mostly coming from Portugal, are seen as much more travelled, open minded and well educated. They are also seen as having a certain vision to adapt the shellfish production business to the world and other territorial developments, i. e. tourism or digitalization processes and provide a *refresh* in the sector. This new blood is also provided by people who are not traditionally from the sea or any similar activity, who decided to shift to the shellfish sector to start cultivating oysters and in some cases, clams. They hold a love for the land and nature and their choice is more voluntary when it comes to starting a business, as opposed to inheriting such business from family members with shellfish farms. This also provides a wave of people and entrepreneurs willing to work within the good practices code and also willing to rejuvenate the more traditional ways of practicing shellfish cultivation.

### **Informal shellfish harvesters**

Evidence can be noted from the tourism actors’ perceptions on the worrying of informal clam harvesters that sell shellfish illegally, which is one the main issues of the parallel market and the food safety of tourist and locals who consume cheaper shellfish at a higher health risk. Their practices are not considered artisanal or professional, and what they do in the natural banks, is just to “scratch” the land, sometimes with forbidden crafts and techniques. None of the participants referred to them as being Portuguese but more related to other cultures and ethnic groups, for example, the gipsy community, Romanians or Nepalese. A common perception amongst the participants was that Gipsy communities lack interest in engaging with people who are not part of their community, nor in developing opportunities or initiatives that represent their activity that offered through organizations for development such as GAL Sotavento. They only collect the same day what they want to sell, even from unauthorized areas, or endangered species or during the period nobody is allowed to practice shell fishing due to the water quality.

However, and besides all these negatives perceptions of the informal clam harvesters, there are two interesting points to highlight. First, informal clam harvesters are also performing the activity and are part of the cultural landscape and therefore, they can still portray the traditional environment of the place; and second, the Gipsies are the new “Sons of the Ria”. The new generations of clam harvesters working in natural banks are mainly composed of this community with in most of the cases, no shell fishing licenses. It is true that licenses to practice shell fishing on natural banks are very limited in number. One aspect they show is family unity, but also they are the ones willing to take over what the more ‘more’ traditional Portuguese used to do. These discourses were captured during informal conversations with inhabitants in the area of Faro while at the same time observing a group of youngsters collecting clams (*see figure 6*). They said that in most of the cases, these clams and cockles ended up in restaurants or near market places, without passing any depuration control.



Figure 4. The “Sons of the Ria”. Group of young clam harvesters. (Photo: own source)

## Shellfish tourist

It was interesting to see that not all tourism actors had the same understanding or knowledge about tourists practicing shell fishing in the *Ria Formosa Natural Park*. One of them actually admitted to not being aware at all. Still, it is interesting to see that shell fishing tourists are perceived almost the same as the informal clam harvesters; “scratchers” with no knowledge or consideration for the arts, shell fishing methods or size. The main difference though, is that they are motivated by curiosity and their activity is limited to provide themselves a nice meal to eat.

Summarizing the 4 categories explained above, an overview of tourism actors’ perceptions and misperceptions of shellfish producers could be as follows:

*Table 3. Overview of tourism actors’ perceptions of shellfish producers and other actors involved in shell fishing.*

<b>Licensed shellfish harvester (Traditional)</b> <ul style="list-style-type: none"><li>- Unique and hard work.</li><li>- Limited working conditions.</li><li>- Traditional, authentic, local and old-fashioned.</li><li>- “Ghetto”.</li><li>- Part of the landscape</li></ul>	<b>Shellfish farmer (Professional)</b> <ul style="list-style-type: none"><li>- More recent activity.</li><li>- Considered a profession.</li><li>- New wave – French, youngsters, non-related people.</li><li>- Control of the Ria Formosa production place (power).</li><li>- Good structure to provide tourism activities.</li></ul>
<b>Informal Shellfish harvester (Poachers)</b> <ul style="list-style-type: none"><li>- Composed by Gipsies, Romanians. “Sons of the Ria”.</li><li>- Not interested in collaborations nor entrepreneurship.</li><li>- “Scratchers” (non professionals). Illegal selling</li></ul>	<b>Shellfish tourist (Casual)</b> <ul style="list-style-type: none"><li>- “Scratchers” (non professionals).</li><li>- They practice shellfishing to eat.</li><li>- Curious users of a traditional activity.</li></ul>

### 5.1.1.2 Perceptions of shellfish producers by shellfish producers

Moving from the perceptions of tourism actors on shellfish producers, it is time to see what they shellfish producers think of themselves. Clam harvesting is one of the most important activities in the *Sotavento Algarvio*, with more than 1.000 people with licenses whose lives depend on this activity. Still, it is an individual economic activity which keeps the sector far from being united.

Whether they are a shellfish harvester or a shellfish farmer, the activity carried out in the *Ria Formosa* seems to be in good balance and beneficial for the ecosystem, according to the general perception of the shell fishermen. However, not all share the same environmental awareness. Since clam harvesters are not working in the same place, they seem to be less worried about the environment, while the shellfish farmers are more prepared to clean their area, motivated by a higher personal interest.

In general they like to show their traditions, like how to work with a traditional *faca de mariscar* (shell fishing knife) or showing where to find each type of shellfish species, as a relaxing and beautiful profession. Shell Fishermen know that showing what they do can provides visibility of their profession, which is in general viewed by all stakeholders as a more commercial activity rather than a cultural asset linked to traditional crafts and arts.

However, being so traditional also implies fewer changes in the way things are done, slowing the process of transformation and adaptation to the new development, rules and policies at stake.

### *Licensed shellfish harvesters*

Licensed shellfish harvesters defined themselves as the real natives of the *Ria Formosa*, the authentic and the ones holding the traditional culture of the area and taking care of the natural place. As JB clearly stated when people comes to visit their place,

*It's like visiting an Amazon tribe eh! We don't have a tribe here but we have this (clam harvesters) eh! We are the true natives...like the tribes in Brazil...or the Indians in America...the real Portuguese is this, and it's here in the Ria Formosa and I would like to see that is not coming to an end.*

*E como ir a visitar uma tribu do amazones eh! Aqui no tenehmos a tribu mas tenhemos isso eh! Somos os verdadeiros nativos...como as tribus no Brasil...o os indios na America...o verdadeiro Portugues e isso, esta aqui na Ria Formosa e gostaria de ver que isso no acaba.*

This self-reflection of how they see themselves expresses an element of uniqueness, authenticity and localism. Comparing themselves with an Amazon tribe also denotes a certain threat for despairing, a threat that this profession and the *Ria Formosa* locals will not be the same or soon transformed into more mechanized and intensive food systems.

They see their job as a difficult profession and that most of the people who do this work, have a real passion for what they do. A devotion that gives them freedom to do whatever they want in a natural setting, but hard not only because of the working conditions – weather, tides, physical effort - but also because it requires years to learn and to enjoy it. Acquiring certain knowledge of the work requires up to 5 years, after this, you are supposed to know enough to go by yourself. The reason for this, is that the more you know, the more you can catch, and that also means that the mind has to work to know all of this. This is an important aspect as the majority of shellfish producers don't own land to produce shellfish – like the shell fish farmers who are land holders through public concession or leases of land in the *Ria Formosa Natural Park* - but they do have a basic license to practice shell fishing on natural banks which is also required to harvest or produce shellfish. Therefore, it is necessary for shellfish harvesters to learn how to interpret the landscape and to know where you can get your catch of the day in a limited time frame. In this sense, a sense of pride is noticeable when talking about this knowledge, passed on to new generations or friends.

Intelligence and memory are characteristics they attribute to themselves, in terms of learning how to make a living from the *Ria Formosa*, but still, acknowledging a low education level. For these reasons above and more, 'real 'clam harvesters enjoy what they do and they don't want to change it for anything, not even for potential extra earnings related to tourism activities. As VL said,

*Clam harvesters are poor, but very rich in spirit.*

*Os mariscadores somos pobres, mes muito rico no spiritu.*

They consider themselves vulnerable, as they are unsure as to what they will get today and if they will make enough money to spend in the day, even if they know where to go to get their catch. This is reflected as part of their behavior, where they “*ganha e gasta*”, which means that they spend what they earn the same day as way to survive daily.

Sometimes, they are hired by some shellfish farmers who need help in their production places, which means a shorter period of comfort zone. Moreover, whenever there is a shortage of available shellfish to harvest in a specific season, due to the water quality, they do not receive aids from the government as, for instance, fishermen do.

For these reasons, even the idealistic and romance perception of working with passion in a beautiful place, it seems that the fishermen refer to vulnerable aspects to define themselves much more, being very hard to make a living and it be slowly decreasing in number of people practicing shell fishing. In our conversation, NS defined as

*A sheep waiting for the wolf. The shell fisherman is more or less this.*

*Una Ovella, a espera du lobo malo. O mariscador é mas o menosesto.*

Interpreting this and linked to the idea of being a tribe of the Amazon, there are more shared views that clam harvester seem to be exposed to different threats that are out of their control. Interpreting NS words, the wolf here seems to be any kind of actor or economic development that is going to take advantage of this vulnerability to make profit and constraint them more. They could be waiting to be eaten by some factors for instance, around sector transformation, spatial planning, tourism development or just a simple lack of support. I will come back to this in the collaboration section and discussion sections.

Although it seems that shellfish producers are seen as vulnerable, some of the participants also admit that in order to make changes, it is also important to be more open and accept changes. Clam harvesters are in general narrow -minded and more trust is necessary to be able to value and protect their jobs. This initiative shouldn't come only from authorities, NGOs or developers, but also from themselves. They reflected upon our conversations and thought that it might be nice to be more vocal with their opinions which are not always heard

### **Shellfish farmers**

In general, the more traditional shellfish farmers with a concession are composed by older men. Shellfish farming is considered even harder than clam harvesting, as you have to use your strength to move oyster sacks or other parts of the production place infrastructure, as well as to clean the land for its use. Low educated in general, there are differences between those who hold a concession and the ones who only have a paid job, which reflects difference in power but also intensity, passion and enthusiasm in terms of developing initiatives.

They are seen as part of the landscape and not invaders of the natural area, working in a symbiosis to provide oxygen the land and to keep the place clean, as they depend on the quality of the place to survive. Of course, not all shellfish farmers are seen as environmentally friendly, but the general perception is that they care about the environment because of their condition of land tenants, which make them more responsible for their 'piece' of the livelihood.

In an attempt to capture the shellfish farmers' characteristics and profession, it is also interesting to see that similar sub categorization of this group, following the *new wave* pattern as seen in the tourism actors participants views, is visible. Before describing them, it doesn't seem within this group that being more professional or having a land concession, with an intense and controlled production system, is a synonym of having fewer challenges in making a living through the shell fishing activity.

Even if you are an enthusiast of your activity, hard working conditions, disloyal competence, pressures, envy and burglaries are part of fishermen's everyday working life and business strategies, as CS said:

*I don't want to show off too much, in order to avoid envies, because otherwise they (in reference to other shellfish farmers) are coming here and cause problems, the break into the place to steal...and a lot of people want to sell near the companies, but we sell from here to the exterior so we are not too seen, to avoid envies and not caught anyone's attention.*

*Eu não quero destacar muito, para não criar invejas, porque sino venen aqui e causan problemas, entran dentro, roban...e muitos preferen vender perto das empresas, mas nos vendemos desde aqui para fora...não queremos ser tão vistos, para no crear invejas..não dan as vistas...não chamar a atenção.*

Lack of trust with people from the same sector does not help to build up a critical mass of participants to commonly set collaborations or initiatives to valorize the profession. These are the words from CS who shifted from a non-related sector to shellfish production, showing a passion for the land and a more open vision for setting initiatives and taking care of the environment. Here, it is possible to speculate and think that the lack of trust within the sector could be motivated in this occasion. By looking at CS characteristics, lack of unity could be because of the condition as a newcomer, as a woman within a predominant men's sector or because of the values and ethics which are part of good practices such as paying taxes and depurating all the shellfish. These factors could be drivers of the mistrust with the surrounding oyster producers who according to CS envy or dislike this way of doing shellfish farming.

An example on how quality, preservation of the natural space and care for the product are becoming values within the sector. The *new wave* of practices is also perceived by the young generations. They have less vicious practices and they want to invest, internationalize, and create real value. Curious examples to reflect this comes from the case of a young shellfish producer in Tavira who was the only one in a big oyster production area to claim compensation after a general loss due to a storm.



This is because he was the only one paying taxes and accounting the production with transparency, so he received support from the government. This could be link to responsible practices and values coming in within the shellfish production sector and reflects the high amount of people that is not yet contributing. However, some bad practices such can be inherited from the traditional family business which means that not all the youngsters follow the same pattern.



Figure 5. Oyster farm of an entrepreneur who shifted from another sector. (Photo: own source)

The other component of the *new wave*, are the French. They were repeatedly appearing in our conversations, referring to the French Oyster producers as a smart and powerful people with knowledge to understand the quality and benefits of the *Ria Formosa* waters. Additionally, they are said to have the economic resources to 'buy' licenses and shift old traditional clam production places to intense oyster production places. Having a dominant foreign investor profile also attracts more people from the same or similar countries which influences the tourism and hospitality development and offer in place. This could lead to a transformation, not only of the shellfish sector, but also of the local businesses that could see here an opportunity to tailor their offer to the visitors' taste. At the same time, becoming international might threaten the local gastronomic heritage as an example of loss of identity or provoke an increase in rent prices, as already seen in many other touristy places around the world.

Apart from complementing the shellfish farmer sub-profiles with more perceptions from the respondents, three new different aspects were identified in these groups which are key in understanding the complexity of the group.

First, is a sense of unity, and the *Cooperativa Formosa* has a lot to do here. After previous bad experiences, trust is being rebuilt amongst actors involved in shellfish farming and slowly more members are becoming part of the cooperative, to stay connected, receive training, advice and create initiatives in a more formal way. As JM mentioned during the interview:

*Members appeared again, starting by one and then followed by 30 more.*

*Apareceron os socios de novo, onde apareciou 1 primero e de golpe 30 mais.*

This shows how shellfish producers can be influenced by new trust and informal relationships amongst themselves. This holds great potential to keep growing and improve the sector, as *Cooperativa Formosa* are the organization that gather the producers that represent 90% of national bivalves' production.

Secondly, there is a hierarchical perception between oyster and clam farmers. Apparently, oysters seems to be more internationalized and ready to be exported, which as a product has more potential to receive more EU funds for development projects. This is because oysters are mostly consumed out of the Algarve, because the product itself is more durable to be transported, but also because oyster production places are seen as working places with more employees. Either clam and oyster production places are eligible to receive EU funds, but the requirements fit more with the oyster food system and value chain than it does with clams.

Finally, and surprising, illegal practices were identified within what is supposed to be the professional and more accountable group. This could have already been noticed in the fact that some land concessions have been transferred to the French oyster farmers, sometimes 'under the table' conditions. Not only in the concessions, shellfish producers in general complain that some of the oyster seeds are getting introduced without control as well as when they are ready for the market, they leave Portugal in the same way.

This avoidance of economic taxes affects the valorization of the profession and ecologically which is a big threat for the *Ria Formosa*. As a way of complaining about how difficult it is to create value even for authorities, CSI as a newcomer and user of good practices in the shellfish sector, reflected it well:

*[...] is not possible that the government approaches someone who is selling in parallel, without license and no depuration and said...."Oh, you are doing it very well!"*

*[...] no puede ser que el gobierno vaya a una persona que está vendiendo por B, apañando sin licencia y sin depurar y decir...."¡Oiga, que bien lo está haciendo!"*

This illustrates clearly that if you want to be heard, valorize your profession, develop initiatives and receive support, a shellfish producers in general should also rethink their shell fishing practices to "give" them something back by working legally and accounting the production.

Also the process of transformation of the old shellfish farmers is affecting them as they don't want to change the way things were done before. This has consequences, as this process was not well accommodated by the sector, with limited resources, competences and capacities. This could be a constraint in terms of bringing more people together or creating initiatives that by nature could be more exclusive. Think for instance about the use of technologies to keep track of the production and sale, the digitalization of the paperwork within the government or the use of social media to promote your production and to stay connected with other shell fish producers or customers, as some examples.

### **Informal shellfish harvesters**

When it comes to talking about informal clam harvesters, shellfish producers in their majority refer to the gypsies and nowadays, Romanians, as the ones who are mainly practicing shell fishing, followed by some unemployed and low-educated locals or seasonal workers i.e. Nepalese hired only for harvesting the orange. The gipsy community, predominant in this group, started to come to work in the Ria in the early 90s, moving from agriculture, commerce and fairs to the shellfish production area in the natural banks. One interesting aspect here is that they are seen as a united, strong community that works together, while the more traditional licensed clam harvesters or shellfish farmers are defined as being individualistic. Hence, shell fishing is a way to socialize also for this particular group. One last component of this group is the weekend clam harvester, defined as a local who literally has nothing to do and they shell fish as a complementary way to earn some extra income.

Regardless of who they are and when they work, there are certain concerns amongst our participants about this group, referred to in the same way as our tourism actor participants as "scratchers". They are worried especially in terms of their shell fishing arts, crafts and the fact that they collect every size available and they sell below normal prices, which affects the economy and the livelihood in general.

### **Shellfish tourists**

It was interesting and valuable to discover and confirm that tourists are practicing shell fishing as a way to spend a day out with the family. This is the case, for instance, of Portuguese visitors coming from other areas outside of the Algarve, locals who are less related to the sea lifestyle or international tourists curious and willing to replicate the practices they see portrayed by the people who really depend on the *Ria Formosa*.

Regarding the shellfish producers' perceptions, there were not specific definitions about them, but through analyzing the dynamics and interactions, it was interesting to see an acknowledgment of their presence, with a high level of acceptance, and a certain pride to see that other people are curious to know more about what they do.

However, some concern was also noted due to the lack of knowledge or skills shell fishing tourists might have when practicing the activity, which could affect the breed and diversity of certain shellfish species, as well as the quantity.

The views that I have described in the shellfish producers perceptions and misperceptions of themselves, the typology is drawn from interviews with five shellfish harvesters, three clam farmers and three oyster farmers, being some of them affiliated in the shellfish associations and cooperatives. The summary would be as follows:

Table 4. Overview of shellfish producers' perceptions of shellfish producers and other actors involved in shell fishing.

<b>Licensed shellfish harvester (Authentic)</b> The real natives of <i>Ria Formosa</i> Free and vulnerable Narrow minded Poor, exposed to lots of variables and constraints Low educated, high knowledge and skills	<b>Shellfish farmer (Land tenants)</b> New wave – French, youngsters and non-related Hierarchy better positioned Uncontrolled Entrepreneurs More responsible with the place
<b>Informal shellfish harvester (Poachers)</b> “Scratchers” Multicultural: Gypsies, Romanians, Nepalese United	<b>Shell fishing tourist (Integrated)</b> Unskilled, accepted Shellfish production threat Tourism and development opportunity

### 5.1.2 Place

To look at *place*, I use in this section concepts that are related to the physical description and livelihood, as well as shellfish production places which in combination with the lifestyle and identity from *people*, can give shape to a particular cultural landscape in the *Ria Formosa Natural Park*. I also look for meanings that can bring more intangible heritage aspects linked to place attachment as well as other feelings regarding the past, present and future of the *Ria Formosa* as a place where different activities are living together. It is a way to contribute in the cultural landscape literature and the place-making where food production places have a role in providing cultural and natural heritage assets that are at the same time used and shared by tourism actors.

Interesting findings not only about the different actors but also where the shell fishing activity is placed have revealed somehow, a relation with their identity and a provision to understand the importance of the *Ria Formosa* as a natural heritage place. Here I see narratives about the *place* as a livelihood which influences and shapes the cultural landscape in this human-nature relation, but also a protected area with a high unique value that is also used for place branding and regional promotion. By gathering perceptions of the place, more details about the different views and opinions of the two different groups of actors and get a better understanding of their meanings are presented in the coming sections.

#### 5.1.2.1 Perceptions of place by tourism actors

Without the *Ria Formosa*, it would have been impossible for Faro and other localities to exist, because is the birthplace of the Algarve, where everything started. Historically, the place offered natural resources, a protection and defense system which stood in the way of invaders. Nowadays, as a protected area, part of Natura 2000 and under the Ramsar convention, the *Ria Formosa* is still considered vital for the community, safeguarding the culture, their historical economic activities and it is adaptive to the new challenges. It has its own tides and winds, and like the people, it has found a balance to keep adapting every day, bringing a fresh start. Still, this balance within the people in relation to the place has to be found.

Most of the tourism actors interviewed in this research were born or spend regular holidays in the Algarve. This is noticeable in the way they talk about the place and how the feeling of attachment is perceived. The *Sotavento Algarvio* and the *Ria Formosa* are united, and people like to be in contact with the place, because they have a holidays' house, they practice shell fishing with the family or because they just like to take a bath. It is part of them, and taken for granted with a strong and intimate connection. Like AG said:



*“...não damos importancia porque é uma coisa adquirida, por exemplo com as pessoas, não pensavmos en la mai o pai porque ja está ahi, já no imaginamos vivir sem eles.”*

*“...we don't give importance because is an acquired good, as for instance with people, we don't think about the mothers because they are always there, we don't imagine living without them.”*

This conversation with AG shows an identity, and a place attachment where local communities see the *Ria Formosa* as part of their lives. Relations with the place seem to be very special indeed, especially for those tourism actors who were raised in *the Ria Formosa*. For them, it is a passion, a relationship built up through the years, even difficult to describe, but easy to feel through the senses. An example is the special smell the *Ria Formosa* has during low tides, which was mentioned during one interview, as a strong and emotional feeling linked to the memories and place.



Figure 6. During the low tides, the natural banks show up and bring the special smell of the *Ria* . (Photo: own source)

For the tourism sector, the *Ria Formosa* is one of the greatest values they have in the territory, an unique landscape that holds an invaluable natural landscape. It's one of the 7 wonders of Portugal, ideal for activities such a bird watching, scuba diving, fishing and more. It is, as the *Região do Turismo Algarve* suggested, one of the more emblematic images used in promotion. It is also a place to contemplate traditional and authentic cultural landscapes through places such as shellfish production areas, which are becoming more popular amongst tourists willing to know more about the fishing arts and products. It is then, in general, one of the priority destinations in parallel to the beaches of the Algarve, with an increasing demand and a big role in place image and branding.

The *Ria Formosa* is acknowledged as the place where the shellfish comes from, where the “sea agriculture” happens through the clams and oysters production areas, nourishing the local fishing communities and providing the freshest products to restaurants and hotels. In reference to the shellfish sector, tourism actors see the place in a phase of transformation, as clam production places that are shifting to oyster production places,. They see it as a place where development opportunities are available with more production spaces, especially small-sized, to democratize and open the possibility for more people to join a more ‘mechanized’ way of producing shellfish. As a livelihood, it is not only sustaining shellfish producers, but also tourism actors acknowledge that it is an essential part for them, as without the *Ria Formosa*, some of them would not exist at all, as their activities are closely linked to the place.

Besides being a fundamental cornerstone for the community, a *Sanctuary* that has being protected for the last 30 years, there are three concerns coming from tourism actors that express vulnerability and risk of losing their natural heritage. The shift to oyster production seems to be a serious topic, motivated mainly by the richness of the water, which allows oysters to grow faster and be exported to international markets. It is also motivated by more tourists who are coming to also eat oysters. The production of oysters in the *Ria Formosa* affects the ecosystem with the introduction of foreign species but also because the oysters need more food compared to the clams, which could enter into an unfair competition to grow, affecting the production of a historical food production with more than 200 years of history. Also the pressure on the place is a concern. Iconic species such as the sea horse are already endangered, due to the amount of people in their habitat but also because of the poachers who are selling seahorses to international markets for medical purposes.

The place is having a more touristy perspective and the amount of boats for instance, has already reached a dangerous point. Hence, carrying capacity, with its consequences in terms of pollution, puts pressure on habitats and causes identity transformation towards a more touristy profile. These are perceived as threats which require immediate attention.

#### 5.1.2.2 Perceptions of place by shellfish producers

It is with no doubt intimate the connection between the place and the shellfish producers. It's their home, their joy, a 'miracle' that allows them to do what they love and to make a living. Rather than a feeling towards a livelihood place, the attachment comes more in-depth. A sense of pride for the *Ria Formosa* is felt for Portuguese people, and it is seen as more than just for tourism purposes or economic exploitation. The endless adjectives to describe its beauty are some of the reasons that have everyone falling in love and not many countries or even other regions in Portugal have a place like this. The *Ria Formosa* is a World Heritage Site, with a daily renovation of 80% of the water, within an unique ecosystem that not even scientist fully understand.

However, this strong connection not only appears in the form of pride or joy, but also there is a certain feeling of sorrow. Some shellfish producers felt sorry for the *Ria Formosa*, as they see how other shellfish producers or users of the *Ria* do not have a respect for the nature. Especially when non local investors introduce foreign oysters species to be farmed in their waters, an area where enforcement is low. In fact, for some older shellfish producers, a *Ria* does not mean anything anymore, as the place has to be meaningful for the coming generations.

The *Ria* is the *ganha-pão* (bread earner), the working place where shellfish producers go every day. It provides job opportunities and is also used for tourism related activities such as fishing, sports and nature. It does not have doors, so there is wide open access for everybody. This includes people with no job or with a low educational level, who go down to the place (except for the concessions places and the protected areas) to have at least something to eat to use the land for an income or to get by. For this reason, the *Ria Formosa* has incalculable value, but also because of its wide range of shellfish diversity, which increases the chances of success.

It is also good to see the perceptions of the different types of shellfish production places, being the *viveiros* (shellfish farms) a more stable terrain to work on, marked on each corner with stakes or concrete blocks to differ from natural banks or other production places. There are differences between clam and oyster production places, being the second more visible with the oyster sacs. The *viveiros* are cleaned, filled with sand until it gets compact, so shellfish and oysters sacs can be placed. But if shell fishing is done in a *viveiro* or natural banks, the feeling of symbiosis between work and place is noticeable, as they places feeds the worker, and the worker feeds the place, by moving the land to regenerate it and to create good conditions for the shellfish to grow. Here, is where the emblematic cultural landscapes of the *Ria Formosa* happen.



Figure 7. Oyster farms sacks provide an unique landscape in the *Ria Formosa*. (Photo: own source)

It is interesting to see the diversity of views and opinions of the *Ria Formosa* when it comes to pollution. While some participants mentioned the place to be in a good condition (especially when looking back 20 years to a period of no sewage system and less treatment of the residuals) others perceive that the *Ria* is polluted, lacking oxygen with the addition of climate change – less rain, warm temperatures and salinity of the water.

In general, what is shared is that the place requires more protection, more enforcement to control and safeguard the place but also to control the oyster production which is already affecting their traditional clam production places. These new production places seem to absorb more oxygen and food but also they contaminate the water. This occurs due to the new oyster farms' iron infrastructures which are oxidized, combined with the 'milk' that oysters produce when growing and this affects the water quality.

Again, this could end up being another threat for the environment, affecting the biodiversity and the endogenous species. For shellfish producers, oyster farms can also influence the clam production places which could challenge the provision of one their most representative products which is linked to the gastronomic identity of the Algarve. This is a threat to the ecosystem and biodiversity of the *Ria Formosa* which could also influence and transform the landscape and the production places into a more intense shellfish farming systems, challenging the quality and the beauty of the place.

### 5.1.3 Product

One of the main reasons this case study was selected in the *Ria Formosa* with the shellfish producers was because of the importance of shellfish, as a regional product, in representing the culinary heritage of a place which also reflects culture, identity and place. Shellfish is everywhere, at peoples' homes, on the street, at work... it is something you find everywhere. It's part of the Algarve lifestyle and its history. As *Algarvian* gastronomic banner, we have the *Cataplana*, but also other distinctive culinary heritage such as *Vila de amêijoas*, *feijoada de linguerão*, *arros marisco*, *amêijoas bulhãopato* which are important to mention. They all have a strong relationship with the regional identity.

In the conversations with participants, lots of different types of shellfish types are mentioned such as *linguerão* (razor clams), *conquinhas* (small clams), *cazulos* (fishing bite), *mexillão* (mussels), *camarão* (shrimps), *buzios*, (sea snails) and much more. These numerous examples illustrate the rich variety of the natural area and the diversity of food that reflects their lifestyle and culture. However, for this research, it is interesting enough to refer to two in shellfish products in particular, which have been highlighted for their perceptions in terms of value but also related to tourism and shellfish economic activities: the clams and the oysters.



Figure 8. Arros linguerão (left) and shellfish Cataplana (right). (Photo on the left: own source; photo on the right: traveler.es)

#### 5.1.3.1 Perceptions of shellfish by tourism actors

In terms of gastronomy, culture and professions, which are linked to lifestyle of the place, shellfish is a fundamental part of their identity. They reflect tradition and sustainable values linked to the local heritage. From an environmental perspective, they are considered one important bio indicator of the water quality and therefore, the need of depurating the shellfish prior consumption is important to ensure food security for all. However, this aspect is also seen as a constraint, in terms of establishing more direct links with shellfish production places as potential integrated experiences linked to landscape, food and territory.

As mentioned in the introduction, this section about product is going to focus more in the clams and the oysters, given the amount of content provided by the respondents but also the relevance of it, here, and the coming sections. Clams for instance, are perceived as the local, traditional and high-value product of the *Ria Formosa*. A specie like *Ameijoa Boa* (see figure 9), of which 90% grows in big part in Olhão, has been considered before for a PDO procedure due to its linkages to the local community and *terroir*. It is a product that is widely used by food tourism operators for instance to portray the gastronomic features of the region through culinary workshops. This protection initiative is meant to add value throughout the food system and avoid disloyal competence from other clam species which might be sold as traditional clams. However, lack of coordination and conflicts of interest between shell fish producers and other stakeholders involved in this PDO process for the clams, together with a clear governance of the sector, constrained the possibility to move on with the valorization of the clam and it is yet to be done, if the interest of the stakeholders comes again.



Figure 9. *Amêijoas boas*, is considered the most valued clam from *Ria Formosa*. (Photo: own source)

On the other hand, we have the oysters products, considered a more recent product in the *Ria Formosa* that has grown exponentially and becoming a trend. Seen as a *gourmand* product, the oyster has a higher commercial value than clams, and for the last 15 years, it has become introduced more so into the Portuguese food habits, attracting international bellies but also adopting the French style of eating them raw, while the *Algarvia* style has been always grilled.

It is interesting to see the relation between the tourism actors with the oyster as a much easier product to sell to international tourists and link to their experiences, as it is more accessible than other shellfish products in terms of consumption in place and it being widely known. It is an advantage for some of the tourism operators to add this to their portfolio as a distinctive product linked to nature and gastronomy. Although the oyster is seen as a product with less identity by some of our respondents, coming from France and even invasive, there are still other views that are being developed in terms of linking the oyster with the regional identity

#### 5.1.3.2 Perceptions of product by shellfish producers

In general, high and steady quality is perceived by shellfish producers when talking about the shellfish products. No matter what you are shell picking or how much you have to dig in order to find different kinds of animal species, the quality will remain the same as the waters of the *Ria Formosa* are in a generally healthy state and are full of nutrients. However, it is true that depuration is needed as more and more areas might be considered *Zona B* (second level of water quality), and therefore, for food security reasons, a minimum of 24 hours in the bivalves depuration center before commercializing it is obligatory.

Even if in general the quality is perceived as a very important factor, it is quite clear to see that the opposite is true and it is not transferred in creating added value. Portuguese shellfish is excellent but still underrated by themselves and this has created the image of having good and cheap food, which is nice to consume in Portugal but difficult to sell as Portuguese product at international level. I have some examples to illustrate this and much more in the coming sections with narratives of the shellfish producers of the clams and the oysters' as food products.

Clams hold a high commercial value for the local community. A good clam harvester might collect up to 5kg which results into 25/30€ per day. There are different sizes which can be used for different culinary or harvesting purposes. High pride is perceived as when they talk about the clams, not considered for them the best in Portugal but the best in the world. However, a bit of concern is also noticed in having a "copy" of clams which might under represent the real quality and identity of the clams. Some people sell '*gat per liebre*' (cat instead of rabbit), so more protection of the product is needed, but nobody is taking the lead for this cause.

Regarding the oysters, there is a clear view that in Portugal the demand is increasing, a trend coming from France. Even though there are local species of oysters, the majority of the production is born in France. Seeds are brought to the *Ria Formosa*, to grow in half of the time and then exported back to France and sold as French oysters (Interview with CSi).



Some local oyster producers were complaining for the lack of pride of the regional Portuguese oyster producers in general, in not fighting enough for the product to create regional distinction and add value. Some even complain about the fact that the products live in Portugal but they will never be Portuguese, as they will have more value in any other market if they are sold as French. Like CSI said:

*[...] they are brought here (oysters) when it has the size of a nail, it is cultivated 1 and a half years in Portugal, and of course, si born in France but has grown here, is like a baby of 7 months from Spain, moved to London and after 40 years, are you going to say that the baby is Spanish?*

*[...] la traes cuando es una uña y la cultivas aquí 1 año y medio en Portugal, que si que ha nacido en Francia pero que ha crecido aquí, esto es como un bebe de 7 meses de España que se lo llevan a Londres y a los 40 años que vas a decir que el bebe es Español?*

There is a lot to say here. Having no control over what shell fish species are entering or leaving the Algarve or the quantity that is produced, is not only affecting the ecosystem and the economy, but having such practices in an already disunited sector is not contributing in possible movements to create value or pride. This is a potential sign of the enforcement and governance challenges the shellfish sector is facing in the Algarve which is directly linked to the communication and the collaboration amongst actors.

Regardless of its popularity and growing market, they are not linked to the traditional culinary identity of the Algarve. Some time ago, shell fishermen used to eat wild oysters to survive, as this was the only food available. However, the trend has shifted towards a controlled production of a good quality product for the *gourmet* consumers, mostly from other areas out of the region.



Figure 10. French oysters raised in the Ria Formosa (Photo: own source)

## 5.2 Shell fishing activity and tourism relations in sustaining cultural and natural heritage

For this section, the research looks at the different relationships between the two main activities in the *Ria Formosa Natural Park* and how the stakeholders practice them. As part of the local identity, shellfish producers play an important role in sustaining and promoting a particular image of the region. Looking at how it is linked to tourism, it can help to understand better the collaborations dynamics which will be introduced further in this research.

As part of the images for branding the place or creating promotional materials, their image together with the *Ria Formosa* landscape are often portrayed as cultural landscape, but also they provide a sense of authenticity and *localism* that more and more visitors look for. In addition to this, emerging initiatives linked to local experiences with producers offer a new gate to connect visitors with the people, place and product.



Figure 11. On the left, an example of how shell fish farms are becoming tourism attraction spots for boat tours. On the right, a clam harvester is portrayed in a boat tour company to promote the place and provide this image of local and authentic. (Photo: own source)

In particular, findings show three levels of interaction, based on how the intensity of this relationship is during the consumption of heritage, which also shows different ways of sustaining it. Following this section, the three levels are further developed.

### 5.2.1 Providing a cultural landscape

Humans and nature adapt themselves to the rhythm of the *Ria Formosa*. Every time the tides are appropriate to work, boats are ready to take visitors for a short trip to show the wonders of the natural park. Bird-watching, snorkeling, nature contemplation, dolphin watching, sunset tour or island tours, are some of the examples of the options that the *place* provides to develop different tourism activities. However, these are not the only ones. More often, shellfish farms – clams and oyster farms - are becoming also part of the tourism operators' portfolio as they portray one of the iconic images of the region, considered as living heritage, tradition and cultural landscape. Moreover, the representation of the shell fishing activity is also portrayed by municipalities and other tourism campaigns out of the activities, to also show what exactly the traditional lifestyle and heritage of the local communities is like.

This representation of the cultural landscape could be easily represented by any of our different types of actors described in *people*, as the activity of someone shell fishing could be seen as traditional, regardless of their legal or place origin condition. However, for some of the tourism operators, having permanent places used to show and explain what this activity is about, become more convenient, and this always happens when you have someone who works in the same production place, as for instance the shellfish farmer.

Regardless of which shell fishing actors are involved in tourism activities, interesting findings have shown that the intensity of interaction during these boat activities is in general low, while the knowledge and awareness of shellfish producers about what is happening is significant. They know that every time a boat is passing by close to them, skippers and other guides are explaining the activities of fishermen. However, there is a sense of distance where tourists use binoculars or when boats are placed in a certain distance from them to take pictures while receiving a brief explanation of the skipper.



Figure 12. A shellfish farmer is working on his place while being observed by a group of tourist. (Photo: own source)

According to some of the shellfish producers' views, this situation could be improved by having a better symbiosis. This might involve having visitors close to their shellfish farms to better connect with what they do, with real interaction and a explanation of an authentic shell fishing worker. This would really add value to the shellfish sector and raise the interest of tourists in the local culture. MR illustrated this view clearly:

*The topic of the shellfish farms is an interesting thing, because it approaches tourists to a shellfish production place. Because I think nobody knows what is happening in this production places, as people just pass by their boats, they see the place and “bye”, that’s it! There is nothing else to observe. I always say that people from the center (Cooperative) that is always important to visit the shellfish farms to know how things are done, because then people will start digging and understanding the real richness of the place.*

*Mas con o tema dos viveiros e uma coisa muito interessante, porque aproxima o turista a produção do viveiros. Porque eu ache que ninguém sabe o que acontece no viveiros, porque as pessoas pasan com o barco, vem, mas “Chao”, não se ve nada. Eu sempre digo aqui o pessoal do centro daqui (Cooperativa) que é muito importante ir a ver os viveiros e saber como se fan as cosas, porque as pessoas començan a excavar e començar a ver a riqueza do viveiro.*

Looking at the narratives of shellfish producers in general, we could say that having tourists visiting and coming around every day is not an invasive or annoying routine that bothers them. They see this as an opportunity to add value to their activity and connect better with the visitors'. Here, there is an opportunity to think and plan ways in which communication and collaboration between actors can be organize to develop sustainable initiatives to bridge this gap and provide added value to the shellfish sector.

From the tourism actors' perspectives, in particular from the skippers involved in such activity, there are different levels of information on how this cultural landscape is presented. Background of the skipper and the type of boat Tour Company might be important factors influencing the amount of information provided.

Generally speaking, all boat tours try to communicate to their clients what shell fishing is about, in the sense of it being a traditional activity or by describing the kinds of shellfish produced. Normally boats from big tourism companies present the shellfish producers quickly, and provide only a bit of context, as they have to keep on showing other wonders and bring more tourists to increase their profit. However, on the other side, tour guides or skippers with a cultural background linked to the fishing community have shown a higher level of information, as they do not only explain briefly the context, but also more details about the history, the requirements to work here, the characteristics of the land, the arts and so on. This slower way to introduce the cultural landscape has even been rewarded by some of the best travel guides – *Rotair* - in recognition of the quality of the tour. Hence, I could say here that there are different levels on how to the tour guides and skippers introduce and explain the *Ria Formosa* traditional landscape.

### 5.2.2 Connection to the local culture and food products

On a second level, this research has found that an already existing close interaction is already happening between the shellfish producers and tourism actors. Tourists' curiosity to know more about what shell fishing is about is increasing and some of them do not hesitate in approaching a shellfish producer to ask questions or to talk about their activity.

Whether they come by boat or simply walking when the tides are low, tourists come to film the places, the people and the shellfish and ask about how they work, in which depth shellfish is found or what products can be found. This level of intimacy is for tourists an authentic experience and for shellfish producers, a way to take a break from their work and connect with visitors from other countries.

This way of connecting with cultural and natural heritage is not only helping to add value and promote the sector, but also instills local pride, as shellfish producers are happy to show with their working hands all type of shellfish. Especially the clams, which are their most valued product. They even learn a bit of English to interact and reference to their precious, by saying sentences like “these are the best clams of the world” or “this is good”.

From the tourism actors' perspectives, some arrangements can be made where boat tours might include occasionally some short interaction with shellfish producers, to connect better and provide something slightly different from the other boat tours. Some of them have informal agreements with shellfish producers to stop by and show the tourists about the profession. They clean the nicest clams with water to make sure everyone has a good photo opportunity to take as a *souvenir*.

These sort of experiences offer tourists a way to understand a little better what products they might find once they are sitting and eating in restaurants, but also to connect with local communities which slowly are becoming more open and confident with the tourists, such as the community of Culatra. As RS mentioned during our conversation:

*People are closed minded, but now they are more open to the tourists. This has changed over the last 10 years...before a tourist was not welcomed, because they said that they will take the girls from Culatra.*

*A gente e muito fechada, agora já som mais abertos a os turistas. Isso mudo faz 10 anhos...antes um turista não era benvindo, porque decian que venian a buscar as chicas de Culatra.*

Then this close connection is not only happening in an informal way, but also some tourism companies are already offering this encounter to provide authentic experiences. Tourism is becoming more integrated within the local fishing communities and new activities and development is already happening. One interesting thing to know is that some people interviewed from the *Região de Turismo do Algarve* were not aware of these sorts of experiences with shellfish producers. This could also show some lack of communication between tourism operators and planners or a limited interest in these activities

What everyone is aware of is the interaction that happens during gastronomic events. Some close encounters can be seen during the *Festa da Ria Formosa* or the *Festival do Marisco de Olhão*, where shellfish producers play an important role in providing the fresh food for everyone but also where they participate to some extent in some of the selling places, interacting with both the local community and visitors coming from this event. On this occasion, it adds good value as people approach them to ask about the shellfish or the activity, especially related to the cooperative of shellfish producers - one of the organizers of the events.



Figure 13. Festa da Ria Formosa is one of most important events in the Algarve with shellfish as a main attraction  
(Photo: algarvevivo.pt)

### 5.2.3 Food tourism experiences. Linking product, landscape and territory

The last level of interaction can be represented by creative gastronomic experiences. Through sustainable food tourism initiatives, shellfish farmers and tourism actors are in full cooperation to provide integrated activities and to welcome visitors to an upper level of knowledge and immersion into the shellfish sector. This is an intimate connection with locals, in a specific setting to understand better the production places and its linkages to their culture.

These interactions are hosted mainly by shellfish producers, in particular oyster farmers. They are seen to be more attractive for foreign tourist and convenient for tourism operators as the production place offers a safer area where tours can be carried out, in order to show the processes, the evolution of the product, to get to know the workers and to taste the products.

These activities are not intended to diversify the economy of the production places or become a tourist attraction, but they are a way to welcome visitors, to show their shellfish farms in order to add value to their activity, offer something different and promote their products.





Figure 14. A food tourism activity in the Algarve where tour operators and shellfish producers work in full collaboration.  
(Photo: [eatingalgarvefoodtours.com](http://eatingalgarvefoodtours.com))

From the tourism side, specialized food tourism operators are the ones in charge of connecting visitors with an interest for these activities and shellfish producers. They normally have a specific focus on the food product, but they do not leave aside the importance of the place and the people involved to make this product happen. It is often a way to portray and promote the culinary heritage of the region and its importance to the local community through food products.

We see then that levels of interactions differ according to the types of actors – food producers, tourism agents and consumers – but still, cultural and natural heritage is deeply integrated in the shell fishing activity in providing different attractions to connect with the locals and the place.

### 5.3 Shellfish producers' livelihoods and tourism development dynamics

Apart from contributing to the promotion and branding of the region and featuring the local community lifestyle and culture, shell fishing is also a way of making a living for more than 20.000 people, who directly or indirectly are involved in the activity (Ferreira, J. G. *et al.*, 2012). Moreover, the *Ria Formosa Natural Park* is a unique ecosystem with an important flora and fauna, warm and calm waters, making it a big attraction for tourism developers and visitors willing to practice all kind of different activities.

Adopting a perspective where the *Ria Formosa* is the livelihood for both economic activities, it is also relevant to see and understand how the dynamics of the tourism development are influencing the shellfish sector and how they are related to the cultural and natural heritage. Our players in the coming sections are particularly composed of the tour boats operating and recreational boats operating in the lagoon and shell fishing tourists representing the tourism sector, and shellfish farmers and licensed shellfish harvesters representing the shellfish sector.

By illustrating the different relations and activities amongst these different actors in this common area, it is also possible to explain different structures, resource access and power differences between different group of appropriators and to see which actors benefit from this development placed in the *Ria Formosa*.

#### 5.3.1 Shellfish production and tourism development

In this section, findings are very illustrative in showing how tourism development in the *Ria Formosa* is directly affecting the shellfish sector but also how the different access to resources, power and possibilities to “use “ the resource differ.

Different actors with different purposes are sharing the *Ria Formosa Natural Park* as a livelihood to develop their economic activities. Historically, the *Ria Formosa* hosted the *Douros*, the traditional boats which sailed around the different canals to find the best spot to collect or farm shellfish. Nowadays, this space is also used by more tourists with recreational boats and tourism operators who want to enjoy and live from the natural area. Having different economic activities can bring many challenges to this one place.

The rapid development of tourism and the lack of regulation and enforcement to adapt both sectors in a synergistic and collaborative way are putting policy makers, managers and users in a difficult situation to manage. In addition, trust and participation are in general low which is not benefiting the possibility to create a living environment for the stakeholders involved.

Tourism in the Algarve has been growing every year. According to Turismo de Portugal (2017), the Algarve represented in 2016 around 33,1% of the Portuguese tourism offer, receiving around 7,4 million of guests who stayed in the Algarve. The consolidation of Faro International Airport, which handled close to 8,7 million passengers in 2017 (Turismo de Portugal) influences enormously the stimulation of developments of new and increased tourism activities in the region, including *the Ria Formosa* area in the *Sotavento Algarvio*.

For the last 5 years, nautical tourism has been intensely developed in the Ria Formosa Natural Park. The *auge* of boat tours to provide nature based activities, landscape contemplation and authentic experiences have grown with little control, as licenses were almost given away, as only basic requirements were needed to start a business in this sector. Still, it is true that some views express that the limit has been reached already and this 'boom' will now be more controlled. Still, private boats, jet skies, and other types of recreational tourism in the lagoon system are happening, since the *Ria Formosa* is a place in high demand with a large flow of people. This has resulted in a big pressure on the natural area, with a threat for the natural environment and the local economic activities, especially during the summer season.

Tourism development in the Ria Formosa seems to be profitable. It creates new jobs, attracts investors and stimulates the economy. This capital and opportunities for development seem to have a clear purpose: accommodate tourism to settle in the natural park. Examples for instance are seen in the interviews, where beaches and islands are (re)shaped with new sand and other modern structures to accommodate tourists. However, with the increase of tourism in the area and in particular, nautical tourism, new dynamics have started with consequential impacts on the environment but also upon the livelihood of the shellfish producers.

The impacts on the environment are seen as important because boat tours and recreational boats travel around every day, making a number of trips, which disturbs the fauna and affects the flora due to the pressure and use of the canals system. All this transit is adding a lot of stress to the environment, compared to the traditional *Douros* or shellfish producers' boats. This concern was already exposed during the conversation with the *Cooperativa Formosa* members, where MR commented that:

*Shellfish producers only travel once to the production place and back, when the tides are high. But the nautical tourism boats don't stop during the day, always going to the same place with a high speed.*

*Os mariscadores solo fan um viagem para lá, e outro de volta quando está la marera, e já, Mais as maritimuristicas não paran tudo o dia, sempre o mesmo lugar e com muita velocidade.*



Figure 15. Tour boat ready to start another round around the Ria (left). Shellfish farmer going back home after workd (left).  
(Photos: own source)

Environmental awareness and the sustainable practices do not always come together. Considering that the *Ria Formosa Natural Park* is a protected area with an unique biodiversity, still big part of the tourists – and tour operators - come also to interact with all the animal species, regardless of their endangered situation. MR, exemplifies this situation really well:

*Tourists' boats are coming here with a lot of people. I do not know if you know the palpario project (touching animals place) from the Life Center in Tavira or Faro, where kids can go a touch and interact with species. "The Ria Formosa is not a palpario.*

*E aqui venen os barcos do turistas e muita gente aqui. Nose si voce conhece o projecto do palpario, no Centro Vivo daqui o en Tavira o Faro, onde vam as crianças a tocar e interactuar com a especies. A Ria Formosa não é um palpario.*

This has already shown some drastic consequences with one of the symbols of the *Ria Formosa*, the seahorse, a sensitive animal whose population has been reduced enormously during the last years. This can also happen with other species as noise, pressure and having thousands of people looking at the habitat can't bring any good.

Apart from the impacts on the environment, there are worries of the pressure that tourism is bringing to the livelihoods of the shellfish producers. The development of tourism in the *Ria Formosa* is bringing more boats and people who want to spend the day out, to the location without taking into consideration that the place is also a working environment for the local community. High speeds, waves and noise are some of the impacts that production places are suffering from relating to tourism activity. This has a direct affect on the way clams for instance, grow, as the water has less plankton and oxygen. The ecosystem takes time to recover in order for shellfish to develop and thus such tourist activities do not help.

Plus, more traffic means more pollution. Shellfish farmers might not be completely conscious in terms of the environment, but it is their livelihood and they still want to keep it as clean as possible, while boats and ferries also bring pollution which often end up near the production places. Together with salt farming and intense agriculture residuals, tourism seems to be another important threat for the health and development of shellfish. This is of course, is not generalized, as the shellfish farm or the places where shellfish is practiced are spread around the *Ria Formosa* and not all of them suffer from the same - if any - of the mentioned threats. Still, the rapid currents of the lagoon could also influence that pollution moves faster and further. Having such impacts on clam or oyster productions could bring major consequences to the local economy, as a lot of people rely directly or indirectly on the shellfish sector.

Some of the shellfish farms are "blessed" with having such good symbiosis with nature that even emblematic animals such as the flamingos are coming for a short stay. This picture is represented by a shellfish producer in a way that tourists stay really close or even enter to his shellfish production place to take closer pictures to the animals, while not considering that someone is also working there. In fact, some production places were also reduced by the administration in order to accommodate ferries to land on the islands, provisioning the shellfish farmer with less land to work on.

These are some resulting examples of how the tourism development is affecting the livelihood of the shellfish producers. Considering these facts, the amount of boats and visitors around the *Ria Formosa*, I could think that these cases are not exceptions.

Adding to the already existing constraints, impacts and challenges mentioned above, there are other factors that have to be highlighted in order to provide a better context of the common resource pool.

First of all, legislation, control and enforcement seem to have an unequal distribution on different actors or sometimes they do not even happen at all. Shellfish farmers and licensed clam harvesters were complaining of the *outlaw* situation of the *Ria Formosa*, where everybody can dump trash, poach endangered or unethically sized animals and nothing happens as there are no real enforcement of the established rules. Boat tours and recreational boats seem to have total freedom, with no limitations on the amount or licenses, leaving the place open for as many visitors as the park can host, with no restrictions on where the boats can place the anchor to spend the day or sleep over at night.

Rules and legislation are set for these purposes but it seems like they are not enforced. Plus big boats are affecting small fishermen boats which might resultantly suffer from the big waves. A nice example is reflected in Tavira for instance, through the words of IR:

*[...] the boat that takes tourists to the beach is giant, and makes big waves that affect the small boats, some of us had already some issues with this... Tavira should be for the Tavirenses, not only for the tourists...and the problem is that licenses are given... "Ahhh, there are a lot of tourists in Tavira, let's give them more licenses" and some of these boats are big and the ferry itself...and it's an issue when tourism starts affecting, because for the people the Ria is their livelihood, and they have small boats that then are spoiled, and they can't complain because the boats are not supposed to be there.*

*[...] o barco que cheva os turistas a praia é gigante, e faz umas olas gigantes que tmb prejudican a os barcos pequenos, aqui algunos já tivemos problema com isso... es que Tavira e tambem para os Tavirenses, não solo para os turistas... o problema é que as licencias som dadas..."Ahhh, há muitos turistas en Tavira, vamos a dar mais licencias" e muitos dos barcos som grandes e o ferry mesmo...é um problema cuando o turismo empeza a prejudicar, porque as pessoas que para eles a Ria é o ganha pão, e ficam com um barco de 3.000 o 5.000€ ao fundo, o motor estropea....não pode pedir responsabilidade a nadie porque o barco pequeno no puede estar.*

Given this opinion from a tourism operator together with the other views and narratives about the different situations where tourism is having impacts on the shellfish sector, it could be possible to think that an unbalanced situation with power and access to resources already exists.

On the other hand, enforcement seems to be more applied to shellfish producers within the *Ria Formosa* scheme. Even if they work and pay taxes, shellfish farmers and licensed shellfish harvesters complain that they are getting fines for fishing in banned areas or not using appropriate gear. While informal shellfish harvesters or recreational boats are not prosecuted, no matter what forbidden practice they do. It could be that tourists are seen as an economic opportunity for the region and they do not want to cut the money flow by imposing strict enforcement and creating a bad reputation; and for the informal shellfish harvesters, in some occasions police know that they might not be able to pay the fines and the little shellfish they pick is for self-subsistence and make little money. Another attempt to control shellfish producers is through the complete ban due to the detection of toxins in the water. A curious case was mentioned by a licensed clam harvester here, where he explained that a biologist from the government found toxins in the water, while a freelance private biologist did not find any at the same time and place. It is a matter that links to public health but JB during the interview referred to this case a "way to reduce the activity during a certain time of the year and make up a situation to control the shellfish production just to control the sector."

Adding to this unequal distribution of enforcement and control, it seems to also be a restriction of access in certain areas in the *Ria Formosa Natural Park* for shellfish producers, while tourism activities and visitors are free to go everywhere, with their bigger engines. This is a big concern for some shellfish producers, as they see how authorities closed the park only for boat tours and conservationists to preserve nature in order to let the ecosystem grow and place a more attractive biodiversity for nature-based tourism to happen. When the land is not worked by a shellfish producer, it turns too wild and is not producing as much shellfish as demanded, but also the land turns too algae which could also affects the biodiversity of the area and the shellfish producers' livelihood system. VL reflected during the interview:

*Sadly, for shellfish producers there are rules, and we are not allowed to go to certain areas, and these "gentlemen" are sailing everywhere. Since some years ago, it has been only possible to sail at a certain speed in certain areas, just for shellfish producers. Now, it seems that boat with big engine can go at any speed. It's very strange.*

*Infelizmente, para os mariscadores existen regras, no podemos ir a especificas zonas, e estos "senhores" navegant por todos lados. Des de hace unos anhos atras, solo se podia ir por a Ria a uma certa velocidade a certas areas, isso para os mariscadores. Agora, aparece barcos a grande motor e poden ir a cualquier velocidad. "E muito extranho.*

As JM said also, with a less skeptical view of the situation:

*In fact, this is a really bad thing for me. Because some shellfish production areas were restricted, to let nature grow for bird watching, but I think, if we do the right thing, a symbiosis between, man, birds and nature, well combined, is possible. Another thing also is that restricted areas where shellfish production grows will die, that is why they need to be worked in order to produce the shellfish."*

*A realidade é que faz uma cosa para mim, mal. Porque prohibiou varias zonas de mariscar, para poder assim fazer crescer a natureza para ver aves, mas eu ache, que si se faz uma cosa bem feta, uma simbiosi entre home, aves e natureza, as cosas se combinan e é posível. E outra cosa, issas zonas interdítas a mariscar vam a estar mais mortas, porque os terrenos precisam de ser trabalhados para poder producir marisco.*

Some illustrations that tourism development and conservation discourses are already affecting the way the *Ria Formosa Natural Park* space is (re) organize according to some needs. This could provide a scenario where shellfish producers see their rights and livelihood limited for the advantage of other sectors with a more dominant position.

### 5.3.2 Shellfish sector and shell fishing tourist

Traditionally, frequent visitors holding a second residency or visiting some relatives in the *Ria Formosa* area like to practice shell fishing, as a way to spend the day out with the family, while taking a bath and staying outdoors. They normally know how to do it since they have been practicing for many years or have family who work in the shellfish sector. However, a new wave of practitioners has arrived. Foreign tourists, coming from other countries such as France, England or Spain, started not too long ago to replicate these practices and have become a new player in the lagoon. They are becoming more visible in the *Ria Formosa Natural park*.

Their curiosity and willingness to know more about what happens when digging in the *Ria Formosa* can be satisfactory for their experience when visiting the place, as they collect just a bit to prepare a meal back at their accommodation. This is one more story to take back to their countries. These tourists' practices are becoming more visible, and as mentioned in previous sections, they could even end up portraying a traditional cultural landscape from a certain distance. Imagine you are a tourist and you see far away people digging on the natural banks. You could easily take this as an authentic local landscape, which can be ironic in this case. Some of them are already bringing tools and becoming *amateurs* or they even go one step further, as JD explains:

*[...] the French go with a lemon in the hand and some tool to open the oysters, and they walk and walk near the oyster farms, because they know the wild ones also grow there, and they go and collect and eat there. The ones who do more this are the ones staying in camp site.*

*[...] van los Franceses con un limão en la mão e alguma coisa para abrir as ostras, e van paseando e paseando cerca dos viveiros, porque a ostra selvagem cria ahi, e eles vam a apanhar e comen. Os que mais fazem isso som os que fan do camping.*

This full use of the *Ria Formosa* landscape could lead to a situation where tourists can potentially be the next image of a tourism brochure in the Algame. Even if foraging is fun and authentic, having tourists wandering and digging around can be potentially dangerous for the delicate ecosystem which is already suffering from other human's activities pressure.

The shell fishing tourists normally go to the natural banks where everybody is allowed to collect up to 2kilograms of shellfish for own-consumption. However, because of lack of knowledge of the place, participants from the shellfish sector have reported cases where they adventure inside the lagoon and start digging, regardless of whether the land is marked as private property or not. Moreover, they dig into the sand and scratch the sand without knowing what they are doing; just simply collecting what comes out of the land. This turns into a big problem as juveniles seeds are taken away from the area, affecting the reproduction and the natural breeding of key species for the communities' livelihood such as the clams.



Figure 16. Shell fishing tourists “scratching” on the natural banks of the *Ria Formosa*. (Photo: own source)



One interesting point to mention here, by looking at *figure 16*, is that shell fishing tourists coming from France, England or other countries could end up portraying a traditional cultural landscape, if seen from a certain distance.

A big concern is noted as several shellfish producers' talk about the possibility of each of the tourists to take a few hundred grams of shellfish that will turn into tones at the end of the year with no control at all. This happens also even when there is a ban of shell fishing in the area, where shellfish producers have to stop their activity, while shell fishing tourists continue digging with the risk that possible toxins end up on their plates. This has consequences of course for the health of visitors but also for the image of the place. For instance, imagine a tourist that has suffered intoxication after "foraging" and then eating the shellfish at home with no knowledge or awareness of the quality or species. This bad experience influences the overall experience of the visitor which could create a bad memory or image for the place as a result. In this aspect, there are some common views coming from the shellfish sector and even the tourism sector, relating to the lack of communication, awareness, education and enforcement in guiding tourists in this aspect. JB illustrates some points during the interview:

*We don't have a sign or anything on the beaches to say "Shell fishing protected area". In Summer, when we have some toxins, only professional shellfish producers are banned, but for the tourists there is no problem...and this is bad, is wrong.*

*Não tenemos uma placa ni nada en nas praias para dizer "protecção de apanha do conquinhas". En verão, cuando há toxinas, solo se proíbe a apanha do marisco a os mariscadores profissionais, pero para os turistas no fica ninguém problema...esto está mal, está errado.*

It seems then that nobody in the policy making or territory developing areas is prosecuting shell fishing tourists and based on my own observations and the participants opinions, there are no signs or communication to communicate which areas are banned or protected. They are free to go everywhere and do everything, while "official" shellfish producers are always prosecuted and not given the chance to discuss with the authorities about the fines or measures to integrate or educate the bad practices in a less harmful way for both the environment and the community.

### **5.3.3 Touristification of the shellfish sector**

The last two sections have already shown aspects of the Ria Formosa where the shellfish livelihood resources are shared not only with tourism operators but also with tourists.

Although it might seem that tourism development is affecting and the place where the shellfish production is located, bringing impacts on the environment and the livelihood, there are still some general views from shellfish producers that also show positive dynamics. Tourism can be good, but it has to be balanced and equally distributed to provide the same opportunities to everyone.

The good gastronomic image of the area attracts every year more and more visitors willing to enjoy the delights of the *Ria Formosa*. This turns into an increase of the demand which influence the prices and the quantity. Many of the shellfish producers interviewed during this research referred to tourism as the trigger of selling their products at a higher price and in more quantity, which impact positively the shellfish producers' earnings, especially during the peak season in summer. In particular, the *Amêijoia Boa* (local clam) is the one which price hikes the most.

Another interesting view is that tourism is good to promote the place in general and the shell fishing activities. As more tourists are coming, more tour boat operators have the opportunity to take them to the *Ria* and this also brings more options to show to visitors the traditional shell fishing work. This could have an added value which might help to a certain extend to develop a bit the shellfish sector and provide more job positions in general in tourism, hospitality and the shellfish sector.

Considering all these positive views above about tourism, it is not surprising that another dynamic was appearing from the data which is also important to add here, as reflects a consequence or a transformation of practices and behaviors within the shellfish sector. There is a slight shift of shellfish producers practices towards a more tourism oriented behaviors or what it could be named, the beginning of a *touristification* process of the shellfish sector.

Since some time ago, people from the Algarve have started liking tourists and understanding how to live with them. More and more people live from tourism, they have started collecting oysters to sell to tourists and even if some do not speak any other language rather than Portuguese, a simple smile helps to pass the message on.

Shellfish producer owning a farm started a boat tour business to bring tourist to the production place and show them how to practice shell fishing, or traditional places in Culatra are now transformed into traditional restaurants to host tourist and make them live the authentic fishing atmosphere. It can bring a lot of opportunities for the local community and diversify or adapt their livelihoods according to tourism development, but it could also threat the local fishing identity, as a commodification of the culture to be authentic, a shift towards a more tourism oriented activities or even an over representation of their culture might not bring long term solutions.

Shellfish prices are getting higher and not even locals can afford it. Shellfish producers sell their products on Saturday at the market because they know there are more tourists, so they can sell at a higher price. Interesting and clear statement from RS:

*They know that tourists are coming today (Saturdays) to buy shellfish. Fish is bought at the market, and the shellfish is bought there (pointing a direction where shellfish stores are). 80% of shellfish is bought by tourists. Therefore, tourists are welcome because shellfish producers know that if there are not tourists, they will not sell the shellfish. The price of fish and shellfish is high because there is tourism.*

*Sabe que o turista va a comprar o marisco hoy (os sabados). O peixe dentro do mercado, e o marisco se compra por lá (pointing a direction where shellfish stores are). El 80% quien compra marisco, e turista aqui. E então, os turistas som benvindos porque os pescadores sabem que si no há turista, não poden vender o marisco. El preço de pescado e marisco está alto porque há turismo.*

And not only the activities and prices are being influenced, but a feeling that place like Olhão are getting ready to accommodate tourism, influencing rent prices and restaurant offers which are modified to the palate of the tourist, as RS mentions:

*It seems like in Olhão everyone is working for the French, even the food itself and restaurants are changing for the French, to be more appealing. The culture is changing, and this is not good, when the culture gets lost.*

*En Olhão parece que todo trabalha para os franceses, mesma comida e os restaurantes estan cambiando para os franceses, é mais apelativa. A cultura está cambiando, e isso não é bueno, cuando se pierde a cultura.*

Interesting perspective here in how this dynamic is brought which has a specific relevance for the provision and sustain of the culinary heritage and the feeling of changing to a new identity.



Figure 17. Tourism brochure from the Municipality of Olhão showing the “Land of Opportunities”.  
(Photo: Municipality of Olhão)



Figure 18. Olhão is promoting the local traditions and gastronomy in Olhão as attractions to attract tourists. (Photo: Municipality of Olhão)

Considering for instance the case in Olhão, a traditional fishing village where the local community has a strong character but where a transformation towards a more tourism oriented activities and services is clearly happening, one can think that the remaining coastal villages are not *escaping* from the tourism wave.

#### 5.4 Intentionality of shellfish producers and tourism actors for future collaborations in sustaining a regional identity in the Algarve

During the interviews with the participants, the topic of collaboration and participation involvement in different activities was steadily appearing in their discourses, where not only past and present initiatives were exposed but also an intention of doing more and new projects in the future.

However, and compared to agro tourism, which had been developed for the last 20 years, the shellfish and tourism sectors have not yet been fully considered as one element for territorial development. This has also influences these linkages and networks when it comes to collaborations. This work has been acknowledge as important to be done in terms of territory development and sector inclusion, but nobody has taken the lead or spent enough time to plan and create an itinerary for it. Tourism developers for instance attribute the place conditions, the food system or the low valorization as important elements to explain why there are not yet more direct connections with the shellfish sector. Their impression is that shellfish producers associations and cooperatives do not have professional structure. Still, possibilities are still open through NGOs in the Algarve such as *IN LOCO Desenvolvimento e Cidadania* (Development and Citizenship) or *Loulé Criativo*, mentioned in several occasions during the interviews as a good example on how to professionally add value and promote the cultural and natural heritage of rural areas. During an informal conversation with the Director of *IN LOCO*, the need and lack of these development initiatives in the shell fishing sector was acknowledged and the limited resources were seen as the main constraints to take further actions.

Still, the willingness to participate and collaborate appeared more often than expected, as both shellfish producers in general, and tourism actors, recognized each others' position in terms of doing possible development initiatives or personal projects by combining both activities. Hence, it is good to have a brief overview of this willingness before introducing the actual collaborations that were found.

From the shellfish producer side, it is commonly shared the view that tourism, tourists and visitors are welcome. There is no problem in receiving people and doing more related activities within the tourism sector, as this could be also a way to show people what they do but in addition, an opportunity to consider new business adventures. Examples are illustrated in terms of the willingness of some respondents in setting a boat tour company and merge it with the local knowledge in the shell fishing, or the possibility to be in close connection to hotels to bring tourist to their working places. Of course, this is not a generalization, as different backgrounds of shellfish producers might provide more closed minded behaviours, where these initiatives are not considered at all or are not easy to understand.

Especially shellfish farmers were the ones who showed more interest in potentially doing initiatives related to tourism. However, licensed and informal clam harvesters whose livelihoods are located in natural banks, can be more affected by tourism since more areas are restricted to natural development, reducing the open access to working areas, making it for them more difficult to find places to work.

On the other side, the tourism actors also presented some interest in developing future initiatives or look for tourism development opportunities where shellfish producers could be involved. Some tourism actors, from food tourism specialized agents, skippers or the Regional Tourism in the Algarve (*RTA*), shown an interest in linking tourists with not only shellfish farmers, but also with the licensed clam harvesters. They acknowledge that still some work needs to be done in terms of training and capacity building, as well as to find the appropriate way to avoid any risks for the experience – food security, visitor's safety - to create these activities. As a way to canalize these development initiatives, the *Cooperativa Formosa* or *VIVMAR* were seen as the appropriate bodies to communicate and start these linkages.

One share view of tourism operators is that this visiting a shellfish producer should not be mass-tourism product, as it could have major consequences for the livelihood and the shellfish producer but of course, they do not want this activity to disappear so here they find an opportunity to preserve it while offering unique experiences to tourists. A *win-win-win* for the tourism operators, the shellfish producers and the visitors.

Apart from creating new products, other ideas expressed by tourism actors were the creation of content through digital marketing, co-creating a *storytelling* with licensed clam harvesters and shellfish farmers or joint-promotional events with hospitality partners.

From this willingness and interest to the actual collaborations, there are some gaps to be discussed. Following this section, the way in which shellfish producers contribute in providing and sustaining cultural and natural heritage in the Algarve is illustrated.

#### 5.4.1 Shellfish producers' collaborations in sustaining a regional identity in the Algarve

Drawing from the interview data, collaboration initiatives between shellfish producers and other stakeholders to portray a regional image are found at different levels and scenarios, with local, regional but also international actors involved.

For instance, in terms of portraying the traditional activity in different communications means as part of the local culture, licensed clam harvesters were contacted from English Magazines, regional televisions or primary schools in the area to explain what kind of activities are they doing, what products are fishing and how people live there. As a curious fact, a regional television from the North of Portugal was broadcasting how razor-clams were captured with salt method, seen as something traditionally exotic, that was even over represented in order to make the show, but which according to the licensed clam harvester, it was for real.

Collaborations in relation to the local culture are connected with the gastronomic events. In particular with the *Festival de Ria Formosa* and the *Festival do Marisco de Olhão*. In these events, shellfish farmers and licensed clam harvesters are invited to participate, apart from bringing the freshest shellfish for the visitors, by the municipalities and the *Cooperativa Formosa*. This second one has a special role in the *Festival do Marisco de Olhão* as one of the main organizers, where also shellfish farmers and licensed clam harvesters participate and represent the sector in the festival, interacting with all the visitors and establishing a relationship between the shellfish sector and the local community.

From a tourism and hospitality level, there is evidence of already existing synergies and collaborations between shellfish farmers and different actors. The existence of tours such as "One day in the Ria" where tourist wear boots and go for shell fishing in a specific place, shows collaboration between a tourism operator and shellfish farmer, as a way to have an authentic experience. Or another collaboration between specialized food tourism operator and an oyster farm as part of a gastronomic experience with local products in a unique place. Moreover, the same oyster farmer established a cooperation with a restaurant to become the ambassador of their oysters to feature the characteristics of the product in relation to the place as part of the identity. In this occasion, the oysters seeds are taken from France<sup>3</sup> but contrary to what it is explained before in the product section, the farmer is proud of growing them in Portuguese waters and selling them as Portuguese.

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<sup>3</sup>The majority of oysters' seeds are from France. Maternity places for Portuguese oyster are not too many and they are under development.



This aspects mentioned above are some of the different contribution examples and levels of how the shellfish sector sustains a regional identity, but other collaborations were found which should not be overlooked, as they could also have an effect in the provision of cultural and natural heritage within shell fishing as part of the identity of the region.

The involvement of licensed clam harvesters with research institutions would be the first example. Cases of co-creation of documents about the traditional arts and crafts of the shellfish producers together with a researcher from University of the Algarve, with the aim also to raise awareness about the pollution in the *Ria Formosa* or collaborations with Marine Biology and Fisheries courses are some examples.

Moreover, studies on sea cucumbers and other potential species linked to the seaweed growth in the oysters' saccor participation in EU projects where the *Cooperativa Formosa*, as representative of shellfish farmers, had been summoned in order to provide opinion and expertise.

The last collaboration theme could be related to development initiatives, formally in terms of providing and supporting business opportunities, capacity building and training courses. *GAL Sotavento* for instance offers support for shellfish producers for instance, to start a new business related to other activities such as tourism, evaluating and financing up to 50% of projects that are accepted. In a more personal development sense, PNRF is inviting sometimes clam harvesters through VIVMAR to join some training courses to know more about the natural park and give more value to the area, but in this case, they mentioned that shellfish producers don't come. Lastly, in a more informal way, the existence of collaborations between shellfish farmers in terms of doing and planning things together, especially when they are neighbors, is also a practice that happens and has to be included.

#### 5.4.2 Limitations in collaborations

Although it is seems that shellfish producers are collaborating in numerous initiatives and participating in projects and promotional campaigns, these activities are not exempt of limitations.

In terms of the gastronomic and food events, shellfish farmers and licensed clam harvesters organizing the *Festival da Ria Formosa* expressed their discomfort, especially with local municipality. They do receive help from the municipality if needed, in terms of arranging the physical space for the festival but they have to manage themselves to find partners and financial resources. In particular for the music performances which nobody ensures the quality. Plus, they have pay for the water and trash services, which they consider should be covered by the municipality.

Without leaving the gastronomy, collaborations between shellfish producers and restaurants are also limited in terms of adding value to the regional products or promoting the identity through their shellfish. A good illustrative case is about a Michelin star restaurant that is in collaboration with an oyster farm, to provide one of the best products to the table of their dinner guests. Initially, this collaboration could be ideal for promotion and valorization of the product and the sector, but it turned to be something different. Portuguese chefs from *Michelin* star restaurants are bargaining oysters prices with local shellfish producers to pay just a few Euros less, instead of encouraging and motivating the shell fish products and adding value by using also their reputation and position in the gastronomic scene, while on the other hand, they are paying 3.000€ for 10 grams of an especial pepper from India with no discussion. This specific information from one of the participants shows already how opportunities to defend and promote the culture or becoming ambassadors of their own region are getting lost. Moreover, in some occasions *chefs* do not want to share where the oysters are coming from to keep the secret from potential competitors, affecting again the possibility to communicate and promote the area. Only a local restaurant in Tavira added the name of the oyster farm on the menu to specify the origin of the shellfish and promote the area. With this information, it seems like individual development and interests are more important than trying to look for possible ways to promote and defend the products and the region.

In the research area, there are is also a feeling of discomfort or lack of awareness from shellfish producers. They see themselves as being used just to "open here" when researchers and scientists need something from the *Ria Formosa* but they do not want to know anything about them. They are not invited to meetings to talk and merge practice and experience with theory, as well as to look for possible collaborations and alliances to present projects to the municipalities as their educational level limited. Not everything is academic and shellfish producers are wondering which are the benefits of all the studies the researchers are doing, as they do not see any benefit for the *Ria Formosa* or for themselves.

A testimonial from RP, a shellfish producer and member of the workers' union, who complained about these collaborations with a research center, illustrates how their position is undermined:



*I was covering my own expenses to go by car to Cacela Velha and collaborate and losing a workday, and they (research center) did not acknowledge my contribution. This is how I ended up my collaboration, not worthy at all. Volunteer work does not have any value at all.*

*E fiquei dinheiro do meu bolsillo para ir a Cacela Velha com o carro a colaborar, e perdiedno amanha de apanhar, e eles (research center) não reconheceron nada. Fouasicomoacabejá, no vale la pena. O treballovoluntariodesinteresado no tenen valor ninguem.*

This is an example of how trust has been affected by the types of collaborations with different organizations, which affects the cooperation spirit in other possible initiatives.

Development initiatives are also part of this set. Opportunities to set new business ideas and receive support from GAL are available but they do have some small details that do not allow for instance, shellfish farmers to receive them. One of the principal issues here is that development support is coming mainly from EU community funds – Mar 2020 - which have specific requirements that are in most of the cases, exclusionary for shellfish farmers.

These requirements are that shellfish producers have to have employee or export, and in the case of clam harvesters, this is not inclusive. Only oyster producers with a minimum production scale can export and provide jobs and therefore, they are the only ones who can benefit from this support. Therefore, these measures are not good and created according to the shellfish sector characteristics and needs.

Apart from the limitations in the areas where existing collaborations are already happening, the shellfish producers also specified the lack of communication and collaboration with regional and national authorities, in relation to spatial planning and creation of new initiatives. For the first case, there is a new development plan to re-organize the shellfish production area in terms to see how different economic activities and conservation can deal together. The concern here is stressed by the fact that this development and organization of the space in the *Ria Formosa* is done in an office with no consultation or a participatory process of stakeholders at all. This could reflect the way in which participatory governance is far from real action, not considering the *Ria Formosa* as a common good which also affects the trust between government and the shellfish sector. RP, illustrates again this lack of communication and shows ironically what he thinks:

*[...] is a disorganized country, without exchange. Things should be organized in another way. What is needed is a lot of dialogue between IPMA, PNRF, Fisheries and the practitioners. They (government) banned an area and we do not know why. Maybe is because the shell fishing knife scares the little birds!*

*[...] é um país disorganizado, no há intercambio. As cosas deberian estar organizadas de outra manera. O que falta muito e o dialogo entre IPMA, PNRF, Pescas e com os praticantes. Eles (governo) interditaron uma zona e nos não sabemos porque. Sera que la faca de apanhar amêijoas espanta a os pasarinhos!*

With this example, it is possible to see that a lot of resource managers are mentioned in the attempt to have the same role in enforcing and regulating the space. But they all present different interests, views and understandings on how to manage the *Ria Formosa Natural Park*. This scenario could be a potential trigger of the mistrust between stakeholders and a lack of common governance is highlighted, which also could have negative impacts on potential collaborations related to tourism and cultural activities.

From the tourism actors perspective, there are also some conditions or constraints that are influencing the collaborations with the shellfish producers. Their perspective also is relevant to be included to see also which factors do they consider and hold them back from co-creating more joint initiatives.

For some tour operators, shellfish producers have to have specific requirements in order to be good for potential collaborations. They have to have certain quality, show sympathy, have a structure and reflect traditional values to become a potential partner. The issue here is that most of the shellfish farmers and licensed clam harvesters do not have the capacity or understanding for it, and previous steps need to be co-designed in order to jump to a more professional development.

Another constraint is the financial status to preserve and promote intangible heritage linked to the sea. In Portugal, funding associated to the sea is considered, according to some of the tourism actors interviewed, the worst. According to the *RTA*, some private, governmental and tourism authorities are already doing an effort to preserve this cultural heritage. However, and besides preservation and valorization initiatives, more political effort is needed, together with all the different levels to have a common work scheme in this matter.

This also reflects the lack of a strategy or the disorganization in the planning and management of cultural and natural heritage of the *Ria Formosa*, where everybody does a bit but nobody takes the lead to shed light on the governance issues of it.

### 5.4.3 Missing collaborations

I believe that by illustrating not only the current collaborations and the already existing challenges to enhance them, but also where collaborations between the shellfish and tourism sector are not happening at all, can help to look at potential opportunities and get a better understanding of the dynamics and the cultural and natural heritage governance in the *Ria Formosa*.

It is interesting to highlight that one of the associations of clam harvesters and shellfish producers, *VIVMAR*, with a historical and traditional background and an involvement in gastronomic events, promotions and research initiatives, does not have any collaboration at all with *RTA*. In particular for the gastronomic events, they do not received any help or collaboration from them, quite surprising given the amount of visitors and the impact it has in the area, to promote and feature the culture and the place through one of their food banners. According to *RTA*, the *Festival de Ria Formosa* in Faro has already reach its limitations and there is nothing else to create, and already thousands of visitors have the chance to know about the products. But these arguments seem weak in terms of showing why they are not supporting the event, and they also added that innovations in the festival like bringing some of the visitors to the shellfish production places are too complicated.

This lack of collaboration is also stressed in the point that a shellfish farmer was already providing ideas during the interview, which personally I think do not require any titanic efforts, like broadcasting videos of the shellfish production places, showing visitors in the event the different processes, products, arts and so on. It seems here that willingness is also reduced to certain actors and priorities are focused in other collaborations and tourism development plans.

Support is also lacking at institutional level, in the sense that shellfish producers associations and cooperative are the last ones to receive support from the national government. Hence, they have to find ways through memberships to get by and provide a minimum infrastructure to help and assist licensed clam harvesters and shellfish farmers. As NS shows this lack of support clearly:

*We have associations here but they cannot support us, because they do not have support from the State either. This is a constant war. Is it clear that the poor will always continue suffering.*

*Tenemos associações aqui mas não podem apoiar, porque não têm apoio do estado também. E então é uma guerra constante. É claro que o pobre continua sofrendo sempre.*

Considering this, if they are already struggling to develop their normal economic activities, in terms of supporting and providing resources for events to promote the local culture, build the community and engage visitors with their activity is reduced to none.

And this is not only happening with the institutional support but also it is part of the Portuguese mentality to not fight for the value of their products and identity in a collaborative way. As CS says:

*We have a lot of good products in Portugal, but we don't know how to give them value. We don't know how to fight for our products. We have excellent wines, chorizo...but we don't have courage. But this is our mentality here, to keep the secrets for individual benefit. It's stupid. There is a lot of envy and lack of trust.*

*No Portugal tenemos muchos buenos productos, mas não sabemos acarinhar os nuestros productos. Não sabemos lutar por nuestros productos. Tenemos excelentes vinhos, choriços...não tenemos garra. Mais isso é mentalidade aqui, guardar o segredo para beneficio propio. É estúpido. Há muita inveja e falta de confiança.*

Together with the lack of organization, this apparent lack of trust between actors and with the products could affect the valorization of the shellfish and the people working behind.

This non-collaboration status becomes more tangible with the findings from the tourism actors. The vast majority of recognized not having any type of collaboration or interaction with the shellfish sector. Only 2 of the 10 participants related to tourism have direct communication with shellfish farmers, because they are specialized food tourism operators. But none of them have any contact with licensed clam harvesters at all, which portrayed the iconic cultural landscape of the *Ria Formosa*.

## 6. Analysis and discussion

In this section, I want to compare the previous section about the findings with the different concepts and literature showed during the review and other study cases placed in the same context with the aim to open debates in some potential gaps and give recommendations for further research.

### *Shell fishing as part of the cultural and natural heritage in the Algarve: a shellfish producers' typology*

As stressed by the Framework for Ria Formosa Water Quality, Aquaculture, and Resource Development (FORWARD) to assess the state and future of aquaculture (Ferreira, J. G. *et al.*, 2012), the need to know more about the aspects of the actors in the shellfish sector, together with the heterogeneous pattern seen through the narratives of the participants when talking about the different people involved in shell fishing in the *Ria Formosa*, and a personal inspiration from Cvitanovic *et al.* (2018), motivated the creation of a shellfish actors' typology. In their study, Cvitanovic *et al.* (2018) designed a typology of a fishing community in Ningaloo, Australia, to better understand their complexity and diversity and study their relations in regards of their motivations and participation in scientific research projects. For instance, it presented how young members were more connected and integrated to the projects than old members, due to their differences in understanding the meaning of being involved in collaborations with scientific research projects. This example demonstrated that communities should not be taken as 'whole' population as different perceptions and characteristics might require different approaches when setting collaboration initiatives.

Breaking down the socioeconomic and cultural characteristics of the different actors offers the possibility to better analyze the complexity of the case and study different relations that formally and informally are established within the sector or with tourism. It provides information by showing differences in the role they play within shell fishing and how do they practice it. This is not intended to fully generalize but could be a way forward to better understand who is taking part of the shellfish sector in the *Ria Formosa*, given this transitory condition the sector is adopting. It should provide information to policy makers and managers related to the *Ria Formosa* activities to better understand who is behind the shell fishing sector when considering initiatives.

Views from the different types of shellfish producers do not differ too much between the two groups. Interesting to see here is that words that are related to authentic, traditional, unique are commonly used in discourses where participants are talking about the licensed shellfish harvesters. They are considered the artisans, those who practice and keep the legacy of shell fishing by working on natural banks and holding the shell fishermen 'knowledge' of the profession. Their identity seems to be linked by tourism actors as the traditional portray of the cultural heritage related to shell fishing in the Algarve. Together with licensed shellfish harvesters, the shellfish farmers' activity doesn't differ too much in the sense of going to work every day, using some of the shell fishing techniques and knowledge, with the difference that of being land tenants with bigger infrastructures. Hence, shellfish farmers can be seen as hierarchically better positioned and more resilient in the sector than the licensed shellfish producers, with more 'power' and intensive production systems, which give them the appearance of being more professional in the sense of business development.

The informal shellfish harvesters and the shell fishing tourists, are the less engaged to shellfish sector, because they do not practice it every day or are not linked to associations or cooperatives related to shell fishing, as well as they sometimes are doing it for own-consumption. Still, it is possible to think curios that informal shellfish harvesters and shell fishing tourists are potential candidates to portray a traditional *Algarvian* cultural landscape. In this sense, users and promoters of the images of the *Ria Formosa* should pay attention to who is practicing shell fishing and understand which are the differences between the traditional arts and crafts and a scratcher. But it is interesting here to see that international actors are also potential contributors of cultural representation or even transformation. Shell fishing tourists on one hand, can be the newcomers that contribute and stimulate the shell fishing activity, as part of an experience to live in the Algarve which could help maintain it.

On the other hand, the new wave of shellfish farmers lead by French oyster farmers could also transform the production places, shaping new landscapes and providing more oysters to local tables, satisfying tourists' bellies but also transforming local ones. This could also influence the culinary heritage in the Algarve, together with other new established fish and shellfish products that are targeting other markets rather than the local one. Food heritage and reputation here can be in a phase of transformation or placed in a common ground where different actors such as international tourists and Oysters farmers can influence more than is expected. Moreover, a study carried in the Algarve (Henriques and Custódio, 2010), presented that the offer of traditional dishes in restaurants is low and even if tourists are willing to experience other cultures, in many cases through food, in the end they consume more what it is more similar to their food culture rather than what it is traditional or local in the place they visit.

Following FORWARD's advice on the potential that informal shellfish harvesters have in representing the culture, this idea could be discussed here. As mentioned by shellfish producers, experts, and people involved in the shellfish sector for a few decades, some of the current actors are practicing illegal arts or capturing unpermitted species. What could be important here is to better understand first some of the drivers for practicing shell fishing out of the formal food system. For instance, bivalves' depuration centers in the public domain are limited and restricted in only one place for the whole area of the *Ria Formosa Natural Park*, in Olhão. Some informal shellfish harvesters can't go due to the distance or because depurating their bivalves would cost them more money than the actual earnings. There are many private bivalves' depuration centers but they are restricted to particular use and expensive to set and maintain, almost out of range for any shell fishermen. Secondly, the number of licenses to work on natural banks is too low, considering the actual people working. Some of the participants do not understand why, other said is because they want to control and transform the shellfish sector where people will only work on land concessions controlled by the government. Not providing more licenses could make some sense in this transitory process to organize and develop the sector but also puts in danger an important number of people whose livelihoods depend on the shellfish and could trigger the informal practice, making the accountability of the production quite challenging. The same *Cooperativa Formosa through MR* complained about this situation for the case in Olhão, asking for more licenses.

*Here in Olhão, there are 180 licenses and if you go now to the Ria, there are thousands of people shell fishing. How many people have a license to shell fishing? Practically nobody. This is an activity...is a "cowboyada itself" (metaphor to compare the situation with the cowboys in the Far West where there are no rules and no law). It should have more licenses for this type of people, at least 300, because then they want to come here to depurate the bivalves and earn some money but they do not have any paper!*

*Aqui no Olhão, há 180 (licencias) e si vaz agora a ver na Ria, há milhares de pessoas a mariscar. Cuantas pessoas tenhen un cartão o licencia para apanhar? Practicamente ninguem. Esta é uma actividade...é uma "cowboyada mesma" (metaphor to compare the situation with the cowboys in the Far West where there are no rules and no law). Deberia de haver mais licencias para este tipo de pessoas, almenos 300, porque depois queren venir aqui a depurar o marisco para poder ganhar o seu dinero,o não tenen um papel!*

This, together with the traditional practices and cultural values, creates a scenario where shellfish producers often do not declare how much shellfish is been produced. This has important consequences as for instance, when it comes to valorize the shell fishing through EU funds, the EU can't help as there is no accountability of the production to have an estimate value or when investments are needed. The sector relies mainly on having this type of aids and funds, as national or regional funds are insufficient, as well as it happens in agriculture. Then, constraints to add value and create initiatives are also restricted here. The same could be applied to shell fishing tourists which are not controlled at all, with any initiatives to educate or raise awareness through signs and campaigns or brochures with good practices or create PES (payment for ecosystems Services) such as daily tourists licenses that could be easily acquired.

Perhaps efforts should be focus first on strengthening relations with the two formal groups – licensed shellfish harvesters and shellfish farmers - to add value and build up long-term strategies around food heritage, nature and reputation and set initiatives with different approaches to slowly include the informal groups – informal shellfish harvesters and shell fishing tourist. Boesen, Sundbo, and Sundbo (2017) explored the relation between local food producers and tourism and what are the factors that can reinforce and make successful such connections. They used a logics approach to look at what commonalities local food producers and tourism actors have. Having at least one common i.e. wanting to support the local community, could be a basis to start with.

The *Ria Formosa* as a place has 'incalculable' value, in terms of biodiversity and livelihood for the community. Both groups share a close connection with the place. With such a strong place attachment, it is surprising that disputes between economic activities and a low environmental awareness are causes that are affecting an area with a high protection and value. Like a mother, the *Ria Formosa* nourishes both nature and humans but it requires more attention in taking care the environment by reducing the pollution and respecting the ecosystem. The point here is to understand that the *Ria Fomosa* as a legacy has to be maintained for the next generations and a more reflection on how the activities and uses of the place are set and organized is needed, in the sense of combining economic activities such as tourism and shell fishing without harming the environment.

Undoubtedly, shellfish plays a key role in the identity of the *Ria Formosa* and in general in the Algarve. They are an extension of the local culture expressed in their culinary heritage which is closely linked to the sea and history of the place. Shellfish products differ in meaning and values. Special attention should be paid to clams and oysters. Clams are much more linked to the tradition and authenticity, through a wide range of regional dishes and are shell fish that has more history in the lagoon and connection to the communities' taste.

On the contrary, oysters are the new trend, the innovation within the sector that is causing a transformation in production places but also in the gastronomic offerings. Hence, special attention should be paid in the management of these shellfish products when using adjectives such as local, traditional and authentic in promotional materials for tourism when refereeing to the image and identity of the local culture.

### ***Shell fishing and tourism in the Ria Formosa Natural Park***

In this research is possible to see three different levels where tourism and shellfish sector are related in sustaining cultural and natural heritage. From cultural landscapes to closer encounters with the local shellfish producers to integrated food tourism experiences, there is clear evidence of the existing synergies that formally or informally are happening.

First and looking back at the literature, we can support the idea here of Rand and Heath, (2006) that shellfish is contributing to the Algarve being more competitive, being the king of the table and a transversal product within the whole tourism sector. Following Sims (2009), something to discuss here is the extent to which oysters are promoted as authentic in reference to the place and culture is true, if we consider that they come from France and sometimes are produced by non-Portuguese shellfish farmers. Hence, we could discuss either the way in which these products are promoted or rethink what authenticity means in this case.

When shellfish producers are portrayed as cultural landscape - being the people who makes the place as seen in different occasions in this research through the photos and images- , or close encounters are happening in a more informal way between tourists and shell fishermen, it is hard to support the idea that tourism is stimulating the shellfish sector, according to Boyne et al. (2003). Looking at it, it does not seem that these synergies are creating new jobs or the shellfish producer is more valued. *Au contraire*, the shellfish producers, in particular licensed shellfish harvesters, seem themselves as previously mentioned in this research, indigenous in disappearance or a flock of sheep waiting for the wolves, as a comparison to show vulnerability, isolation and not being heard or helped by anyone. Moreover, their image is always used and their stories shared. but very little is done with them in the end. Perhaps more thoughts about how tourism can initiate a real valorization process of the profession is needed.

It is not clear if tourism is providing a rejuvenation of the sector but we saw through the emergent food tourism initiatives that something positive is happening with the new wave of shellfish farmers. In particular with the young generations and new comers from other sector completely different to the activities in the *Ria Formosa*.

Within the full integrated synergies between shellfish producers and tourism actors specialized in food tourism, the connection and positive synergy is more obvious. In this sense, it is possible to connect with Hall and Sharples (2008) about the idea that they get more exposure to consumers, brand awareness and loyalty, increasing the relationship with customers by showing the 'behind the scenes'. Still, education opportunities can be improved to educated no only visitors but to invited policy makers and other stakeholders to join this visits to raise their own awarenees and seize new opportunities.

Portugal will be a more demanded destination and the *Ria Formosa* will receive more visitors, which could lead to a tendency for the natural area to disappear, if it's not well managed. Other perceptions have different views where tourism will not grow too much in the future, but regardless of tourism development, there is a common shared view. The *Ria Formosa* Natural Park is suffering already from carrying capacity issues, due to the lack of control of their economic activities. Shellfish productions are little controlled and permits to establish nautical tourism activities have weak limitations. Even though tourism is still seen as a positive factor for development, without a proper management of marine tourism – i.e. no licenses or access restrictions -, the shellfish production can be affected due to the increase of pollution and the impact generated by the boats and people. This is crucial for the future of the shellfish sector as well as the *Ria Formosa*, as they strongly depend on the water quality, vital for the development of shellfish and to ensure food safety. Other concerns linked to the capacity of the ecosystem can be the commercial marine traffic or the introduction of foreign species – already happening with the introduction of the French Oyster. During the interview, JM from the Shellfish cooperative also state:

*I see a good future, really good. But there are 3 or 4 aspects that need to be done which don't depend on us. They have to go through other entities, or the government. We have to be more "green" and watch out for the capacity of the Ria, and these are very important factors for me, that we all have to be more careful, otherwise the future of the Ria will be very sad. There is another factor which is pollution.*



*Eu vejo um bom futuro, muito bom. Mas há 3 ou 4 aspectos que falta fazer que não passam por nós. Passam por entidades, o governo. Temos que ser mais naturalistas e vigiar a carga dostras na Ria, e isso são dos factores muito importantes para mim, que tudo devemos ter mais cuidado sino o futuro da Ria vai ser muito triste. Há outro factor que é a poluição.*

That could also indicate a certain hope for the future but confirms the need of a bigger effort to better manage the space and the economic activities.

When places like the *Ria Formosa* are used by tourism, using its beauty for nature-based activities and nature contemplation or the waters to enjoy other nautical activities and by shellfish production as the same waters hold a good quality to produce high quantities of shellfish, dynamics, including conflicts are likely to happen. This case is not an exception, and what we have seen in the case of the *Ria Formosa Natural Park*, is that tourism is taking some advantage in the access and use of the livelihood. Or explained in another perspective, shellfish producers' place is affected by tourism and being reduced to let tourism activities happen, with the pretext of conservation and preservation of the biodiversity. This could potentially benefit the conservation of natural heritage, but the *Ria Formosa*, as Lowenthal (2005) says in his study, natural and cultural heritage go together and cultural landscapes in particular even more. Hence, protecting the area could affect the traditional activity to keep the *Ria Formosa* as it is and healthy enough to produce shellfish with potential negative consequences in the identity and place, as it could be transformed to something different, still unknown.

Apart from restrictions in certain areas, shellfish producers are limited in their capacity to navigate around the lagoon with smaller boats and engines, while recreational boats and boat tours don't have any. Pressure on the environment is another aspect to mention here, as nautical tourism might not be an direct extractor of resources such as shell fishermen, but their activities affects the ecosystem, adding pressure on the environment, as the usage of bigger engines, use of anchors or the frequently of the recreational activities don't bring any benefit to the natural area.

Moreover, enforcement is not fully working, potentially due to the amount of different organizations such as IPMA, PNRF, Fisheries or Marine Police that are supposed to control and enforce the law. It can be that different priorities or views difficult a common-ground strategy to establish a better organization. Here, more attention should be done in terms of setting better governance of resources and spatial planning to apply the law. Due to the lack of enforcement and permissive laws, the *Ria Formosa Natural Park* is a resource that is easily used by many actors in more or less sustainable ways. Surprising, considering the degree of protection it has.

Tourism, in particular nautical tourism, is taking a good advantage of it. Boat tour businesses have been exponentially developed in the recent years with little control and strategy. Together with recreational tourism in the lagoon, they go everywhere, they can drop anchors everywhere, sleep over in the *Ria Formosa*, go fast, do snorkeling and much more, which should be controlled given the high value and protection of the place.

However, the shellfish sector is not exempt or innocent in the way resources are being used. Still practices in terms of polluting the area or the size are out there. In reference to the new wave of shellfish farmers, most of the respondents talk about the French oysters' producers, and how are they literally using the *Ria Formosa* waters to feed their oysters and take them back to French market. They say the waters are not good any more, they will go somewhere else, leaving the region with more pollution and less biodiversity.

### ***Collaborations between shellfish sector and tourism***

In terms of collaborations, this research has exposed where the shellfish and tourism cooperate together and found out where other collaborations with other sectors are placed as well. It is clear that there is an increasing interest in developing projects that involves the creation of food and tourism initiatives around the aquaculture sector in the *Ria Formosa*, with a lot of stakeholders coming from the governmental side, the research and university sector and tourism boards for instance, but we can see a common denominator: little is heard about the shellfish producers' opinion and views. What do they think about these new tourism strategies? Which role do they have in all the planning and managing process? What are the constraints they are facing in not collaborating? By asking shellfish producers about tourism as well, this research aimed to see what are their opinions about the tourism sector and how do they perceive it, making a bit visible through this information what ideas and views do they have and where tourism could also think in terms of enhancing this current collaboration status.

Drawing from another study, a case of mutual collaboration and participation in community based natural resource management showed that clam harvesters have been involved in a participatory process traditionally related to more strict environmental matters, as shown in Guimarães, M. H. M. E. *et al.* (2012). With the vies and opinions in terms of collaborations where shellfish producers are involved, this study can provide more information that collaborations are often in the research area for the sake of the environment. Still, shellfish producers still feel that they are not heard, acknowledge or considered when working together with other actors and only used to take experts around the natural area or collect shellfish samples.

In the same study above, researchers could find relevant information about the shellfish sector's perspective on the Ria Formosa Natural Park Managers performance and about the structures in dealing with the conservation of the sea grass, vital for the conservation of the lagoon. It is interesting to mention some findings such as the overrepresentation of clam farmers by too many organizations, which represents a barrier to find mutual agreements on management, the lack of communication and established routes within the sector, the disorganization of the activity (e.g. black market, lack of facilities) or the lack of incentives to improve management and invest in production.

Contrary to Guimarães, M. H. M. E. *et al.* (2012), this research has found out that only three organizations are representing shellfish harvesters and the shellfish sector– VIVMAR, *Cooperativa Formosa* and the *Sindicado dos Pescadores do Sul* (General fishermen syndicate). If we consider that 90% of the national bivalve production is placed here (Guimarães, M. H. M. E. *et al.*, 2012, pp. 30), perhaps is not that much representation after all. In terms of roles, we can stress the first two, being the *Cooperativa Formosa* the one that is democratizing the commercialization and controlling the prices through the public depuration center, at the same time than is responsible for creating infrastructure and marketing strategies for the sector; and VIVMAR as an NGO which aims to provide legal advice, defending interests, representation and communication to governmental authorities and managers of the *Ria Formosa*, for instance. Hence, collaboration, communication and adopting perhaps more participatory governance initiatives should not be constrained by the number of organizations and motivated by knowing better their roles and establishing connections with the actors involved in the management of the organizations as representatives of the sector.

In a tourism context, this research has gathered direct opinions and narratives that have confirmed the lack of communication between the shellfish and tourism sector. For instance, RTA considers VIVMAR as a stakeholder in their marketing strategy for the Gastronomy Tourism development but they acknowledged not having any contact with them at all. Communication between the tourism sector and shellfish sector at institutional level is non-existent when it comes to organize food events or co-creating promotional materials as well. In terms of collaborations, they are mainly limited to individual cases from tourism actors that looked into detail to develop specific ideas, but general valorization or more integrated strategies are yet not happening.

Even in the study of Antunes, P., Santos, R. and Videira, N. (2006) '*Participatory decision making for sustainable development - The use of mediated modelling techniques*', the case of the Ria Formosa was included for testing the model and the participation did not involved any of locals or resource users as a focus group, which it could have been beneficial for them in terms of getting more familiar with the integrated participation concept and build trust with the rest of stakeholders.

These are some examples to illustrate the lack of co-management or integration in the natural resources management for certain initiatives, the lack of trust and structure for a more cross collaboration amongst stakeholders in the *Ria Formosa*. But this lack is not always inexistent and some dynamics are different. This has a clear influence in the shellfish sector, in favor of other sectors such as tourism or research but it has also can lead to negative impacts in the cultural and natural heritage, as shown previously.

However, a plan to re-built trust within the shellfish sector and between resources users of the *Ria Formosa* by the *Cooperativa Formosa* and a certain and new young blood coming into the shellfish sector. Here, focus group to gather different actors in representation of different sectors, views and opinions to talk about a subject of interest could be an interesting approach for this case. It could be done by considering and gathering stakeholders and by creating a more open and participative governance around the possibilities that concerns both sectors - space usage or co-management initiatives - but especially, to have a better understanding on each other's views and bridge the gap between the shellfish and tourism sectors. Specially after seen considering that collaborations are restricted to certain areas, involving stakeholders in initiatives around heritage could be also a way to soften the mistrust with possibility to work together in other areas i.e. spatial planning or tourism development in the area, where a better governance is also needed.

Another possibility could involve a research to fully develop an approach to study in depth the commons and the resource governance, to look into detail how the resources are use by different actors and how this influences their access to the resource. This research has already shown some points where commons of the *Ria Formosa Natural Park* are shared and shed some light with some examples.

Finally, further studies could adopt an explanatory research focus as seen in Hjalager and Johansen (2013) to elaborate on the willingness of shellfish producers and quantify better if they want to participate more in different initiatives and if so, how, having in mind the typology that has been created for this study case. The case in the *Ria Formosa* slightly shows that shellfish producers have a certain willingness to be more involved in tourism related activities. More research here could be recommended to provide indications on potential initiatives where shellfish producers and tourism can establish better symbiosis to provide and sustain the local heritage of the *Ria Formosa*.

## 7. Conclusions

The main aim of this study was to explore and get a better understanding of the dynamics within the shellfish production, in the sense of providing cultural and natural heritage; and how tourism development uses the shellfish sector to portray traditional and local experiences. Also how they influence the shellfish sector resources, in the context of the *Ria Formosa Natural Park*. The following paragraphs present the different research questions accompanied by a conclusive answer.

### **RQ1: How is shell fishing understood in sustaining cultural and natural heritage by shellfish producers and tourism actors?**

In order to understand how the shell fishing activity is seen by the research participants in relation to cultural and natural heritage, this research has used the main concepts of people, place and product to establish a framework in relation to the identity, profession, landscape, territory and food, related to shell fishing. Designing a typology to define people has shown the diversity of actors and it is fundamental for the development of this study to understand the different socioeconomic and cultural aspects of the different actors who practice shell fishing.

The analysis of the findings have shown that perceptions of shellfish producers do not differ too much between shellfish producers and tourism actors, when talking about the characteristics, profession and behaviors of the actors that practice shell fishing in the *Ria Formosa*. Licensed clam harvesters are the traditional and authentic natives of the *Ria*, while the others are a conglomerate with different country or ethnic origins. Still, they all host to some extent the capacity in either sustaining identity or providing locality linked to cultural heritage which has to do more with the shell fishing practice itself, still very alive. Shellfish farmers are seen as powerful, holding infrastructures, land tenants and having employees, which put them in an advantageous position with the rest.

Awareness of shell fishing tourists is different across actors. Being in the *Ria Formosa* everyday allows shellfish producers to know more and get a better feeling of who spontaneous visitors are and how they behave, while tourism sees this from a certain distance, which obstacles them from realizing that this is a current issue.

None of the participants have any doubt about the importance of the *Ria Formosa* as a natural place. It's a highly valued area that feeds both animals and humans. It provides a livelihood for the two economic sectors, landscapes and unique natural areas protected to a certain degree. Moreover, there is a place attachment and shellfish farmers, and licensed and informal shellfish harvesters considered their home in general, a big part of their identity and their everyday lives. However, some of the participants are concerned about the (mis)use of the resources, not having enough control or putting too much pressure on the environment and putting all these benefits under threat.

Finally, the shellfish product is deeply rooted in the identity of the local culture, being promoted and sold in restaurants. The clams and the oysters are the main shellfish products, being the first ones important in terms of traditional cuisine and linked to locality while the oysters are part of a new implementation, a new trend that increasingly demanded by tourists.

On the other hand, oysters are providing opportunities to attract investors and develop new tourism products which could provide new cultural and natural activities, influencing the heritage in place. It could also be said that the image of the oyster in the *Ria Formosa* has evolved from being a low-valued, for own-consumption food by for shellfish producers to a *gourmet* product portrayed in restaurants and tourism brochures. Having said this, shell fishing is in general perceived as elemental and a cornerstone for the Algarve and the *Ria Formosa* in terms of representing their cultural and natural heritage image.

### **RQ2: How do shellfish producers and tourism actors are related to each other in sustaining cultural and natural heritage and how do they practice it?**

The shellfish and tourism sectors are linked to each other, at different levels and in different ways, being some more formal and others with less communication or formality. An interesting aspect to highlight here is the level of communication, which also influences the way these relations are established. Different ways of providing and sustaining cultural and natural heritage are found in this research.

For instance, on several occasions, tourism uses brochures, portraying here and there the shellfish producer, but with no communication or collaboration in terms of the content or the story. Here, tourism uses their iconic image to promote the destination. On the other side, shellfish producers are making use of the tourism development, to see niche opportunities to sell oysters to tourists or simply raise the prices as they will sell the same for a better price.

Plus, in these informal ways, shellfish producers are the perfect cultural landscape to portray and offer the authentic *Ria Formosa*. They are always working there, regardless of the type of shellfish producer, offering a cultural landscape that does not require any communication with them, even less collaboration as skippers and tour guides already know enough to briefly introduce what they are doing, if visitors ask.

However, the experience of enjoying a cultural landscape can be upgraded with real contact with the shellfish producers, which on occasion is happening if the skipper or tour guide knows the worker or even if they are “friends”. I have some examples with the cases where boat tours are approaching closer to the shellfish producers, offering the “One day in the Ria” experience or on land, through the gastronomic events where visitors can also interact with them and eat local shellfish. This is mainly maintained by licensed clam harvesters and shellfish farmers, who are showcasing the authentic sector and fighting to add real value to their profession

Lastly, in terms of food tourism initiatives, the relation is deep and based in a close relation between tourism operator and shellfish producer. Here, the level of trust is high and they both have a clear common goal and awareness of the benefits, at the same time co-creating the experiences, by offering their specific expertise to innovate within both sectors. In this case, this is mainly possible through shellfish farmers. Still, possibilities with licensed clam harvesters are object of study for some tourism actors in terms of providing something even more “authentic”.

Looking back to the typology, this could have a direct relation in which the level of engagement is also influencing. It could be summarized in a very simple way. The more formal the shellfish producer is, the better the communication and collaboration with the tourism sector.

### **RQ3: How are shellfish producers' livelihoods affected by the development of tourism? What are the dynamics and tensions between these two sectors?**

There is no doubt regarding the benefits that both sectors bring to each other, as has been shown throughout this research. Briefly, one is having available, and in most of the cases free, authentic and local heritage linked to the culture and nature in place, and the other is free riding in obtaining more exposure and increasing their sales. However, negative externalities, impacts and potential threats exist. Sharing resources is always complicated and a potential cause for conflicts. The *Ria Formosa Natural Park* is not an exemption.

It would have been interesting to see if tourism actors also have something to say, but this wasn't the purpose of this question, whilst it also wasn't mentioned by any of the actors. Apparently, there is only one sector (tourism) that is affecting the other (shellfish sector).

Starting with the raise of boat tours in the natural area, their activity already has an impact on the environment with their big and powerful boats, disturbing the right conditions for shellfish to grow, along with the rest of the biodiversity. Moreover, these recreational boats and boat tours are using the natural space for their activities, restricting shellfish producers the access to certain areas. Here, there is a clear unbalanced situation of resource usage.

In reference to another threat, shell fishing tourists seem to be another one. An uncontrolled access to the natural banks, with no license and no knowledge to shell fish some shellfish for their own experience, is putting into risk the regeneration of key shellfish species.

Even if they are quite accepted, little is known about the real amount of people that are shell fishing every year. Here, special attention is needed and initiatives through more educational and enforcement were discussed during the research, in terms of looking for potential solutions and campaigns to reverse the situation.



One last remark is the *touristification* of the shellfish sector. This is already happening and is affecting the shellfish producers' lifestyle and livelihoods, switching their practices to sell fashionable products instead of working on the traditional shellfish or becoming more open to interact. This could be a result of living together for a few years and a proof of the beginning of a transformation.

#### **RQ4: How do shellfish producers contribute to sustaining a regional identity in the Algarve and how do they practice it?**

The analysis of the findings in reference to the last research question has shown narratives from our participants that express where collaborations or contributions by shellfish producers are happening when sustaining a regional identity in the Algarve.

Firstly, both tourism and shellfish sectors are aware of the importance of each other's presence for different personal and common benefits and how one can provide innovation and opportunities to the other. Here, the willingness to be more involved and explore possibilities to combine economic activities seems to be in general high.

For the existing collaborations, the gastronomic reputation of the Algarve has a lot to say with the identity and shellfish producers are an important part of it. In communication, portraying localism, providing authentic images through their economic activity, their uniqueness is attractive enough for travel magazines and tourism to be used as attraction, promotion and distinction.

More in place, shellfish producers have a role in food events and are involved in some food, cultural and nature-based tourism experiences where visitors are given the choice to connect with the *Ria Formosa*, either with the products, the place or the producers, with the linkages that they have to the cultural and natural heritage.

Something that is confirmed already in the discussion and which backs up previous studies is that their collaborations are still more linked to other purposes rather than having full collaboration in portraying the *Ria Formosa*, in telling their story and being co-creators of the image to add value to their profession. They are frequently "used" as the *Ria Experts* to help researchers to go around and find spots with the keys species, all for scientific purposes.

Having said this, these collaborations are also limited; not having the right effect to add value, to build trust or to enhance the engagement of more actors related to the shellfish sector. In some occasions, collaborations have produced a reverse effect instead of creating engagement. With gastronomic events, they have to work hard to find options to keep offering the same quality with little help from municipalities or from tourism actors. Moreover, shellfish producers are a bit skeptical of the benefits of the research sector and sometimes they felt mistreated.

This research has also shown the lack of communication and collaboration between key organizations in both tourism and shellfish sectors. This is also applicable in other sectors or important decision-making such as spatial planning or environmental management.

But whether if shell fishing is in transformation process or exposed to multiple factors that go beyond of the existent difficulties of the profession itself, there is still a lot of components and characteristics in this particular human activity that are part of an important legacy of the Algarve. This legacy has to be open for changes but also preserved, accompanied and acknowledged by tourism actors, the local community and by themselves in order to not to forget where their culture comes from but also to be able to see where the *Ria Formosa* wants to go in the future.

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## Appendix

### APPENDIX I. Interview guide

Date:

Time:

Place:

Name interviewer:

Name interviewee:

→ Start recording.

- **Confidentiality**

Everything that will be discussed during this interview will only be used for this research.

- **Questions on behalf of interviewee**

Are there any questions from your side so far?

#### Personal information

- Nationality/homeland
- Job position
- Age

#### Opening Questions

1. Can you tell me a bit about your **profession** and what kind of **activities** do you normally do?
2. Can you tell me what **an average week** looks like?

#### Interview Questions

##### Topic 1: Local shellfish products and gastronomy

3. Could you tell me more about your role in the shellfish sector?

- How is your identity (or regional identity) represented? What does it mean for you?
- What kind of values/feelings do you attach to it?
- How important is for the local community or the even for the region?
- And for the development of food tourism / attraction of tourist with high interest in food?

##### Topic 2: People, culture, community, sense of place, identity, food production place, landscape

4. Tell me more about the ways of life of being a shellfish producer

- What is your relation with the Ria Formosa (and landscape) where shellfish is produced?
- What does this livelihood represent for the shellfish producers and the local communities?
- Tell me more about what shellfish producers represents for the local culture and the identity
- And for the development of food tourism / attraction of tourist with high interest in food?

##### Topic 3: Perceptions on relationships between food tourism and shellfish producers

5. Could you describe a bit the relation between your activity and the development of tourism?

- What do you think about bringing closer shellfish products, lifestyle and places to visitors and tourism in general?
- Have you seen tourism affecting you?
- How it could be beneficial/damaging for the shellfish producers and place productions?
- Do you think it could have a changing effect of the shellfish production activities? Which one?
- What about new business opportunities?
- Could food tourism have an effect on the preservation of the shellfish production places, lifestyle and local gastronomic culture? (Ria Formosa)

##### Topic 4: Collaborations / Participation



6. About tourism, have you been in participation in the Festivales do Marisco in Faro/Olhão... or food tours with some of these companies? (Use brochures)

- Are you collaborating and participating in food tourism initiatives?
- Would you like to collaborate with others to create new business opportunities? Why not? With whom?
- How these collaborations could affect your everyday's activity?
- What are the positive/negative aspects of these collaborations?
- Could you tell me something about the collaboration with other shellfish producers – tourism – government to promote and provide identity in the region?
- Are these relations encouraging a network/cluster for shellfish tourism? How/why not?
- What are the main resources/constraints for these participations to happen?

#### Topic 5: Future/Vision of shellfish sector

7. How do you see the shellfish sector in the future? Do you think it will change?

- Do you think shellfish will have more participation with tourism?
- Do you think tourism will affect you or your next generations?

#### • Ending interview

• **Announce end of interview** This was the last question of our interview.

#### • Summarize

- **Questions/comments** Are there any aspects you would like to comment more on?
- **Repeat confidentiality information** Again, this information will only be used for this research.
- **Official end** I would like to thank you very much for your time and effort during this interview.

→End recording

### APPENDIX II. Coding scheme

Code	Sub-code	Sub-code2	Description	Text fragment example
Image			This is the main code for the views and opinions regarding the shell fishing activity as part of the cultural and natural heritage in the <i>Ria Formosa</i> , linked to People, Place and Product.	
	People		This is a sub code for image in terms of people, as the actors' identity involved in the shell fishing activity.	
		People by shellfish producers	This is a sub code for the view and images of people by shellfish producers.	<b>VL:</b> Os mariscadores somos pobres, mes muito rico no spiritu.
		People by tourism actors	This is a sub code for the view and images of people by tourism actors.	<b>JA:</b> O pescador o mariscador, não é cool, a valorizaço de estas profesiones não fue bem feito.
		Characteristics	This is a sub code to describe characteristics and traits of the shellfish producers.	<b>VL:</b> Mas os mariscadores som libres, cada umo pot fazer o que quere.
		Profession	This is a sub code to describe the Shell fishing profession as a profession.	<b>NS:</b> Não é facil. Preciso de praticar o longo dos anhos no terreno, tener humildad, e força de vontade para aprender, sino não andas, sempre estás no mesmo lado. E claro, com a practica, a veces sozinho é melhor, vais praticando e com os

				anhos vas viendo a diferencia do terreno, as diferencias na Ria e saber leer para saber donde estoy. Não é chegar o terreno e empezar a cavar, eu se donde cavar o onde veo que está o marisco. C
		Knowledge/Education	This is a sub code to describe the level of knowledge and education that shellfish producers have.	<b>CS:</b> As pessoas viveristas tenhen muita poca formação literaria.
		Types of shellfish producers	This is a sub code to categorize different types of shellfish producers that were appearing in the data such as Oyster farmers, French shellfish farmers, illegal clam harvesters.	<b>AS:</b> Os ciganos que trabalham de forma ilegais, apanhan o grande e o pequeno... apanhan tudo.
	Place		This is a sub code for image in terms of the <i>Ria Formosa</i> as a place, as the natural area where the shell fishing activity is taking place.	
		Place by shellfish producers	This is a sub code for the view and images o by shellfish producers.	<b>VL:</b> Esta Ria não tem portas. Todas pessoas sem emprego o sem estudies, recorren a Ria para sobreviver. Pouco o menos, as pessoas apanhan para comer. A Ria tenhen un valor incalculable. Porque é fonte dalimento para muita gente, não é solo para pescadores o viveristas, é para toda a gente. A Ria é espectacular.
		Place by tourism actors	This is a sub code for the view and images of place by tourism actors.	<b>RS:</b> A Ria é uma das 7 cosas mais bonitas de Portugal, el segundo sitio humedo (wetlands), a região humeda mais grande de Europa, o segundo sitio mais importante no Portugal para Birdwatching, o melhor para os cavalhos de mar de mundo, era... e temhe um lugar unico como Culatra en Portugal, donde o 90% vivem da pesca.
		Livelihood	This is a sub code to describe the place as a livelihood.	<b>JM:</b> A Ria da para o turismo, para trabalhar, para passear, para lazer.
		Place attachment	This is a sub code to describe participants' descriptions of their attachment to the place.	<b>JB:</b> Ria, é natureza, é natural... é a nossa alegria, no muitos paises tenhen uma Ria assim como a nossa.
		Physical description	This is a sub code to describe physically the place.	<b>MR:</b> A Ria como espaço unico, Patrimonio Mundial com a renovção 80% agua

				cada dia. Ecosistema muy complejo, há científicos que não conseguem saber como funciona esto, que é uma cosa espectacular.
		Shellfish production places	This is a sub code to describe the place as shell fish farms.	<b>AS:</b> Os viveiros som diferentes, é uma cosa onde as ameijoas estan concentradas.
		Positive description	This is a sub code in reference to positive aspects related to the place.	<b>VL:</b> É saudável, a Ria Formosa a muitos anhos, cuando tenia 18-20 anhos, tenia muita polução, no havia estação de tratamento das aguas...hj ha tudo. A Ria está limpa.
		Negative description	This is a sub code in reference to negative aspects related to the place.	<b>CS:</b> Eu tenho pena da Ria. Não respeito para natureza. Os franceses venhen para cá com as ostras pequenas, sem control sanitario. Meten as ostras a Ria, a Nossa Ria (gesture pointing her heart), ponen as ostras que poden trazer dolencias e matan tudo. Esso ja esta cambiando nos varios paises, mas ainda há pessoas que poden rebentar os ecosistemas, sem respeito a natureza...
	Product		This is a sub code for image in terms of shell fish as shellfish product, linked to the local culture and identity.	
		Product by shellfish producers	This is a sub code for the view and images of product by shellfish producers.	<b>VL:</b> Com as ameijoas é diferente porque precisa cavar, mas as ostras não.
		Product by tourism actors	This is a sub code for the view and images of product by tourism actors.	<b>AS:</b> Tenehmos uma amêijoa que unica que é amêijoa Boa. El 90% de amêijoas buenas, venhen de aqui Olhão
		Oysters	This is a sub code to describe data related to the oysters as a shellfish product.	<b>RS:</b> E a nivel de ostras, tmb é uma cosa. Agora há mais ostras, chevan os sementos e ponen dentro do sacos para produzir as ostras. E voltan e crecen rapido, mas tmb há mortalidad. É las cascaras das ostras vam ao mar.
		Clams	This is a sub code to describe data related to the clams as a shellfish product.	<b>RP:</b> Agarro as sementas e pongo no viveiro e cuando tenhen a medida, depois eu apanho. A pequenha não. Há tres medidas: a grada, a media e pequenha, que é som 3 cualidades... é la outra é

				melhor, tambem é mais cara.
		Value	This is a sub code to describe the value perception of the shellfish products.	<b>PC:</b> Ameijoas por ejemplo, tenhe o mayor valor comercial, um bom mariscador apanha 4/5 kilos de ameijoas al día, para assim pagar o combustivel de embarcação e depois ganhar umos 25/30€ .
		Quality	This is a sub code to describe the quality perception of the shellfish products.	<b>AG:</b> Cuando tu nunca comiste uma ostra boa, podes comer cualquier ostra, eu ache. Cuando tu probas uma ostra excepcional, é difícil probar uma ostra normal. É como as relações humanas, si tenhe amigos excepcionais, no vai a quere amigos “mais o menos”.
		Gastronomy	This is a sub code to describe shellfish products as part of the local gastronomy and culinary heritage and other related data linked to gastronomy in the <i>Ria Formosa</i> area.	<b>VL:</b> Depois tenhen as feijoadas de linguerao, arros marisco, ameijoas bulhao pato, tenhen muitos pratos como os productos que som indentiade da Ria Formosa.
		Other types of shellfish	This is a sub code to describe other shellfish products mentioned in the data, such as razor clams, cockles or small clams.	<b>JB:</b> Com arrastre de conquinhas, se gana muito dinero, mas agora isso no é posivel.

Code	Sub-code	Sub-code2	Description	Text fragment example
Dynamics			This is a main code to categorize all the different dynamics that were found between the shellfish and the tourism actors.	
	Interaction		This is a sub code to describe different interactions between the shellfish and tourism actors in providing and using local assets that reflect the cultural and natural heritage of the <i>Ria Formosa</i> .	
		Low interaction	This is a sub code to describe low interactions between the shellfish and tourism actors.	<b>JA:</b> Eu sei que os que fan passeios turisticos no barco falan do que estamos fazendo... falar e ver a pie é diferente.
		Occasional interaction	This is a sub code to describe occasional interactions between the shellfish and tourism actors.	<b>PC:</b> O turismo, filma, vai lá e ve, ja tenho falado com pessoas para mostrar como se fa isso (apanhar), eles se fican perto de mim, como se apanhan as ameijoas, e

				depois tenho que lavar as ameijoas e mostrar (gesture of hands holding clams), e eles “Oh good!”, e eles encantados,
		High interaction	This is a sub code to describe high interactions between the shellfish and tourism actors.	<b>CS:</b> Eles traem um grupo asi grande de estrangeiros de varias nacionalidades. E som pessoas interesadas en venir e conocer uma cosa nova, e ver como crece..si nos tenemos os bebes, e muito mais giro porque mostramos desde o inicio, damos una volta com eles e depois vamos a um sitio especifico onde tenemos o pão, o vinho, provan as ostras, depois há una troca de ideas, tiran fotos...en geral pessoas que som mais receptivas e estan já mais creadas.
	Impacts		This is a sub code to describe the different impacts that tourism sector is having to the shellfish sector in the context of the <i>Ria Formosa Natural Park</i> .	
		Tourism development	This is a sub code to describe the impacts of tourism development – nautical tourism and recreational boats – on the shellfish sector in the <i>Ria Formosa</i>	<b>MR:</b> O que preocupa mais e a pressão das embarcaciones dentro da Ria. Porque som muitos, vam a umas velocidades excessivas.
		Shell fishing tourist	This is a sub code to describe the impacts on the shellfish sector by tourists and visitors practicing shell fishing in the <i>Ria Formosa</i> .	<b>JM:</b> Os turistas que venhen a apanhar 700 gramos de conquinhas, assim millares e millares de turistas...isso fica mal, porque a conquinha está pequena en criação, cuando esta fora na costa, está criando.
		Touristification	This is a sub code to describe the influence of tourism in changing the shellfish sector towards a more tourism related behavior/activities.	<b>RS:</b> Sim, agora muitos pescadores apanhan ostras para vender os turistas. Está mudando a o turismo.

Code	Sub-code	Description	Text fragment example
Collaboration		This is a main code to categorize all the collaboration content between the shellfish and the tourism sectors.	
	Collaboration initiatives	This is a sub code to describe the where the previous or the current collaborations initiatives between the shellfish and the	<b>VL:</b> Tuvimos uma entrevista pa televisão do Norte, que dezian que apanhar o linguerão com a sal era mentira. Mostramos as pessoas



		tourism sectors are happening.	como apanhar o linguerão com a sal. TVE, entrevista sobre o ganador da rota de petisco.
	Limitations	This is a sub code to describe the limitations of the collaborations in different initiatives between the shellfish and the tourism sectors.	<b>VL:</b> Não tem muito apoio, e os participantes tenhen que buscar as maneiras de econtrar parceiros, e isso tenhen que melhorar, encontrar um pouco mais de cualidade, sobretudo, dos espectaculos. A calidade do producto e garantida, mais debe de melhorar outros aspectors do Festival.
	Lack of collaboration	This is a sub code to describe where collaborations between the shellfish and tourism sectors are missing or lacking.	<b>JA:</b> Confesso que com os mariscadores ainda no fazemos ningum trabalho tão profundo como conseguimos fazer com os agroproductores. Porque fuimos fazendo a medida que iba aconteciendo...eh...com os mariscadores e pescadores e mayoritariamente sempre a traves do comercio.

Code	Sub-code	Description	Text fragment example
Future		This is a main code to categorize views and opinions regarding the future of the shellfish sector and its potential linkages to the tourism sector.	
	Next generations	This is a sub code to describe views and opinions regarding the future generations in the shellfish sector and its rejuvenation.	<b>IR:</b> Os jovens tenhen melhor ligação com o exterior, melhorar os processos, dan um refresh al voltar aos setores, novas technologies, e tenhen um valor commercial muito mayor. Eu ache que aqui no Algarve va a passar tmb, por ejemplo com o amigo viverista.
	Challenges	This is a sub code to describe views and opinions about the challenges that the shellfish sector and the tourism development have to face in the context of the <i>Ria Formosa</i> , such as the carrying capacity, pollution or sector transformation.	<b>OS:</b> O futuro da Ria depend da poluição, menos poluição, mais oxigeno e entao o marisco creix. E o turismo tmb afecta porque fican motores dentro da Ria, mas o turismo faz falta.
	Opportunities	This is a sub code to describe the views and opinions about opportunities, willingness to participate and potential initiatives within the shellfish sector and between the shellfish and tourism sectors.	<b>AS:</b> Sem duda, que aquí si som mais abiertos, en 3 o 4 anhos e posivel de tener un producto creado que tenha muitas mais posibilidades.

## APPENDIX III. Visual Materials for graphic elicitation stimuli



**ISLANDS TOUR W/ LUNCH**  
- 4 islands, 3 STOP'S and aperitif, lunch in fisherman house and guided visit culatra island

**BIRDWATCHING**  
Birdwatching in a protected area, clams and oyster farms (Binoculars included and informations)

**SEAHORSES TOUR**  
-Observation of seahorses (snorkeling equipment)

**SUNSET SUMMER TOUR**  
Guided tour along ria formosa with a stop to watch the sunset with oyster's and wine.







**TOUR DES ÎLES AVEC DÉJEUNER**  
4 îles, 3 arrêts et apéritif, déjeuner chez l'habitant et visite guidée.

**OBSERVATION D'OISEAUX**  
Observation d'oiseaux, viviers de palourdes et parc à huîtres (jumelles et informations inclus)

**TOURS DES HIPPOCAMPES**  
Observation d'hippocampes (équipement de snorkeling inclus)

**SUNSET SUMMER TOUR**  
Visite guidée dans la Ria Formosa et arrêt sur une Experience Olhão, where around every corner you will be able to find out about the history and roots of an ancient fishing village. In the cubist city, as it is known, you can discover traces of a unique architecture, both in the Algarve and in Portugal.

Indulge in the local cuisine, made of the best ingredients both sea and land have to offer.

Be dazzled by the beauty of the Ria Formosa, a natural treasure of the region, home of unique fauna and flora.

Relax in our islands, with uncrowded beaches, and set out to explore sites there are still to be discovered.

Visit the Olhão Markets, next to the city's waterfront, where you will find the freshest produce. Take a while to admire these unique and remarkable industrial architecture buildings, built in the early twentieth century.

**Living Heritage**  
Museum in Olhão  
Património do Alentejo



**O QUE É A DIETA MEDITERRÂNICA?**

A palavra "dieta" tem origem no termo grego "diaita", que significa estilo de vida.

A «dieta mediterrânica» é um modelo cultural, uma forma de viver em comunidade, resultante de contextos climáticos e geoculturais particulares, que originou um padrão alimentar de excelência, reconhecido pela medicina e a nutrição como benéfico para a saúde humana.

Este padrão alimentar, rico pela sua variedade nutricional, equilibrado e saudável, baseia-se no consumo de produtos frescos, sazonais e de proximidade. Os alimentos, sobretudo de origem vegetal, como os cereais, as hortícolas e leguminosas, frutas, frutos secos e plantas silvestres, são consumidos de acordo com a época do ano dando origem a uma cozinha de cada estação que se faz acompanhar de algumas carnes e peixes.

O pão, o azeite e o vinho constituem a trilogia da Dieta Mediterrânica.

As convivialidades, as festividades cíclicas e a mesa têm um lugar central no universo cultural mediterrânico e na transmissão de conhecimentos entre gerações.



**SABINO BOAT TOURS**

**Sabino Boat Tours**  
Enjoy the time of your life and discover one of the 7 Natural Wonders of Portugal, the Ria Formosa!

Aproveite o melhor tempo da sua vida e descubra uma das 7 Maravilhas Naturais de Portugal, a Ria Formosa!




**ATIVIDADES \* ACTIVITIES**

Passeio Barco - 1h30 / 3h00 / 5h00 c/Almoço  
Observação de Golfinhos - 2h30 • Aluguer de Barco / Barco à Vela  
Boat Tour - 1h30 / 3h00 / 5h00 Lunch Included  
Dolphin Watching - 2h30 • Boat Rental • Sailboat Rental




**PONTOS DE INTERESSE \* POINTS OF INTEREST**

Ilhas de Culatra / Faro / Alagoa / Deserta • Observação de Golfinhos  
Observação de Caralhos / Marinhos / Jovens • Snorkeling • Vivários de Amêijoas  
Culatra / Faro / Armonia / Desert Islands • Dolphin and Seahorses Observation • Birdwatching  
Snorkeling • Shell fish farms

Informações e Reservas: ☎ +351 915 661 860  
Booking & Information: 🌐 [www.sabinoboattours.com](http://www.sabinoboattours.com)