Fisheries Research
February 2022, Volume 246 Pages 106168 (9p.)
https://doi.org/10.1016/j.fishres.2021.106168
https://archimer.ifremer.fr/doc/00735/84657/

Consumer perspectives on coastal fisheries and product labelling in France and Italy

Zander Katrin [1, *], Daurès Fabienne [2], Feucht Yvonne [1], Malvarosa Loretta [3], Pirrone Claudio [4], Le Gallic Bertrand [5]

[1] Thuenen Institute of Market Analysis, Bundesallee 63, 38116 Braunschweig, Germany
[2] Ifremer, Univ Brest, CNRS, UMR 6308, AMURE, Unité d'Economie Maritime, IUEM, F-29280 Plouzané, France
[3] NISEA, NISEA, Fishery and Aquaculture Economic Research, Via Irno, 11, 84100 Salerno, Italy
[4] University of Palermo, Piazza Marina, 61, 90133 Palermo, Italy
[5] Université Brest, Ifremer, CNRS, UMR 6308, AMURE, IUEM, F-29280 Plouzané, France

* Corresponding author : Katrin Zander, email address : k.zander@uni-kassel.de

Fabienne.Daures@ifremer.fr ; YvonneFeucht@gmx.de ; malvarosa@nisea.eu ; claudio.pirrone@dremm.net ; bertrand.legallic@univ-brest.fr

Abstract :

The term 'coastal fisheries' designates a form of fishing which is under heavy pressure due to competition by large-scale high sea fishing. Setting up markets for seafood from coastal fisheries might offer possibilities of product differentiation when appreciated by consumers. The aim of this research is to analyse the potential of marketing seafood from coastal fisheries by investigating consumers' perception of coastal fisheries and their attitudes towards a label for coastal fishery products in France and Italy. This research combined qualitative (focus groups) and quantitative methods (online survey) in two different steps. 'Coastal fisheries' were mainly perceived positively, as they provide fresh products, and are healthy and important for coastal areas. Although opinions on labelling in general, and on coastal fisheries specifically, varied widely, about 70% of the respondents were in favour of a coastal fisheries label. The willingness to use a coastal fisheries label increased significantly when domestic origin, high-quality products, eco-friendliness, support of local/coastal communities and artisanal fishing practices were part of this kind of label. It is concluded that using a label for communicating the origin coastal fisheries appears to be promising for the two study countries: France and Italy. A prerequisite for the success of this kind of approach is that the seafood products must fully comply with consumer expectations, as they are of domestic origin, be of very high product quality and fished in an artisanal or eco-friendly manner.

Keywords : Consumer behaviour, Fishing, Labelling, Sustainability, Coastal fisheries

1 Introduction

Coastal fisheries are a major contributor to world fisheries in terms of production, employment and food security (Said and Chuenpagdee, 2019; Teh and Pauly, 2018). At the EU level and according to the Annual Economic Report of EU fishing fleets (STECF, 2020), the small-scale coastal fisheries (SSCF) sector generated a gross value added (GVA) of € 685 million and involved more than 57,000 fishers in 2018. Made up of a diversity of vessels whose fishing activity takes place in coastal waters (local within 12 nm and close within 40nm), coastal fisheries are often associated with small-scale or artisanal fisheries (Prosperi et al., 2019) although no consensus has yet been reached on the definition to be adopted (Rousseau et al., 2019; Davies et al., 2018; Soltanpour et al., 2017). However, coastal fisheries can be associated with certain key characteristics, such as: 1) they involve a wide variety of seafood species (fish, crustaceans, shellfish) destined for the fresh market (Guyader et al., 2013; Josupeit, 2016); 2) their landings are characterised by a very high degree of freshness, due to the proximity of the fishing grounds to the landing ports and, as a consequence, to the very short duration of trips made by the vessels (no more than 24 hours) (Guyader et al., 2013; Josupeit, 2016); 3) they are often associated with small-scale or artisanal fisheries (Prosperi et al., 2019) and referred to as being 'passive and low-impact fisheries' (Said and Chuenpagdee, 2019: 8); 4) they are characterised by low capital-intensive economic systems, very low-cost in energy (Prosperi et al., 2019; Guyader et al., 2013); and 5) they often refer to traditional fishing activities or modes, strongly anchored in coastal territories and communities (Pita et al., 2015).

For several decades, scientists and the public have paid greater attention to industrial and large-scale fleets (World Bank, 2017), mainly because of their implication in marine resource overexploitation. The need for better understanding of the features and behaviour of large-scale vessels was essential to design more efficient resource management systems (OECD, 2006). The rediscovery of coastal fisheries is recent and has highlighted their economic and social importance at national and local levels (Bladon et al., 2016; Guyader et al., 2013). Politically, the wish to maintain coastal fisheries has led, for the most part and historically, to the implementation of certain dedicated resource management measures like preferential access to coastal resources (EU, 2013) and the development of regional plans for small-scale fisheries in the Mediterranean

Sea, where coastal fisheries are mainly composed of small-scale vessels representing 83% of the overall fleet (FAO, 2020).

However, this rediscovery also highlighted their high vulnerability, as shown by their highly variable economic performance over the last ten years (STECF, 2019). This vulnerability of coastal fisheries results from several drivers, including the complex governance of stocks and spaces shared by this commercial fishing fleet with other users, in particular recreational fisheries (Lloret et al., 2018). Another major factor of instability results from major problems encountered by coastal fishery producers in entering globalized markets (Frawley et al., 2019; Schuhbauer et al., 2017; Crona et al., 2016) where their production is in competition with landings from large scale vessels and/or aquaculture products (Pascual-Fernández et al., 2019; Guyader et al., 2013). Indeed, of the 15 seafood products representing 73% of apparent consumption in 2017 in the EU (EUMOFA, 2020), only two species (Hake and Atlantic Cod) could be, at least partly, associated with coastal fisheries.

In this context of globalised competition, one potential avenue for increasing the competitiveness and resilience of coastal fisheries could consist in improving production value through a differentiation strategy in the market. Recent research addressing consumers' preferences and motivations for food show that consumers are increasingly concerned about issues such as sustainability, and this is also true for seafood (e.g., Zander and Feucht, 2019; Bronnmann and Asche, 2017; Carlucci et al., 2015; Kalshoven and Meijboom, 2013, Whitmarsh and Palmieri, 2011, Olesen et al., 2010; Jaffry et al., 2004). This is clearly an opportunity for coastal fisheries, commonly perceived as more sustainable. Margins for improvement exist for this fleet segment and recent initiatives implemented by seafood producers (Menozzi et al., 2020; Pascual-Fernandez, 2019; Prosperi et al., 2019; Barclay and Miller, 2018; Salladaré et al., 2018; Wahlen and Dubuisson-Quellier, 2018; Daurès, 2018; Josupeit, 2016) suggest that competitiveness could be increased through well-tailored marketing plans. However, sound understanding of consumer preferences and purchasing behaviours are prerequisites for such development (Carlucci et al., 2015).

A precondition for generating additional demand for any product is consumer knowledge of its specificities and its characteristics. This is particularly challenging in the case of so-called credence attributes which cannot be verified by consumers neither before nor after consumption (Caswell and Mojduszka, 1996). Specific production characteristics are typical examples for credence

attributes. A common tool for making consumers more aware of products' credence features is labelling. Ideally, labelling provides consumers with the kind of information that might become decisive for their individual buying decisions. Labels are a means of educating consumers and aim at making them adjust their purchasing decisions (Teisl et al., 1999). The specific challenge in labelling is that consumers need to know about the issues communicated and that these issues are relevant to them. Only then can labelling affect consumers' product perceptions and judgements and succeed in exerting an impact on consumers' purchasing decisions (Solomon et al., 2010).

The research presented in this article analyses consumers' perception of coastal fisheries and their attitudes towards the potential labelling of coastal fisheries' products. It answers the following specific questions: What do consumers associate with coastal fisheries? How do they perceive a label for seafood from coastal fisheries? And finally, what influences their intention to use of a coastal fisheries label? Based on the answers to these questions, we conclude on the market potential for a label for seafood products from coastal fisheries.

The research focuses on France and Italy, two countries where coastal fisheries occupy an undoubtedly important position. Contributing to 27% of the EU SSCF total landings and 23% of the GVA, France ranked 1st at European level for this fleet. Italy comes in second position and contributes to 15% of the total SSCF landings and 16% of the SSCF GVA in 2017 (STECF, 2020). Moreover, these 2 countries are among the main seafood consumers at EU levels: the apparent consumption of France and Italy in 2018 was above the EU average (33.5 and 31 kg per capita, respectively, versus 24 kg at EU level). Furthermore, Italian households' expenditures on seafood were the highest in the EU in 2019, with €11,000, followed, in third position, by France, with €8,700 (EUMOFA, 2020).

The paper starts with the methodological approach (section 2) which embraces a combination of qualitative (focus groups) and quantitative (online surveys) methods, both conducted in France and in Italy. This is followed by the results (section 3) where the outcomes of the two research steps are presented, merging the results of the focus group discussions with the quantitative results, and discussed. In the final section (section 4), conclusions are drawn in the light of the most recent (sea)food labelling developments.

2 Materials and Methods

The research presented in this article combines qualitative and quantitative methods in two different research steps, both conducted in France and in Italy. The first step consisted of a series of focus group discussions, aiming at exploring consumers' attitudes toward coastal fisheries. Based on the outcome of these discussions, a quantitative online survey was administered. While the focus groups opened up the field by revealing the variety of different perspectives, the quantitative research allowed gathering numbers and frequencies for different opinions. By combining both research steps, a deeper understanding became possible and reliable conclusions and recommendations for the marketing of seafood from coastal fisheries could be developed.

2.1 Focus groups

The qualitative research step consisted in exploratory focus groups. Focus groups actively build on interaction (Finch and Lewis, 2014; Ryan et al., 2014) and allow gaining deeper insights into the multitude of consumers' views by relying on exchange between participants, with minimum interference by a moderator (Halkier, 2010). Due to the openness of the method, a broad spectrum of ideas and the underlying reasoning can be elicited without the limits imposed by standardized interviews (Finch et al., 2014; Bertrand et al., 1992). Focus groups as a qualitative tool aim at exploring a topic, e.g. getting an idea about the variety of existing opinions. No representativeness is aimed at with this kind of research. Typically, a focus group consists of 5 to 12 participants purposefully selected in line with the research question. Guided by a trained moderator, the group engages in a face-to-face discussion for one to two hours. The moderator usually follows a guideline with a series of prepared questions to elicit the diversity of perceptions on a particular issue (Finch et al., 2014; Ryan et al., 2014).

For the present study, a total of nine focus groups were conducted in France and in Italy during January and February 2017. Five discussions took place in France (2 in Brest, 2 in Paris, 1 in Dunkerque) and four focus groups were conducted in Italy (2 in Ancona, 2 in Salerno). In total, the focus groups involved 77 participants, from four different areas: a) the Italian Tyrrhenian coast; b) the Italian Adriatic coast; c) the French Atlantic and the Channel coast; and d) Paris, as an avatar of

non-coastal consumers. The focus groups were organized by means of a snowball procedure, starting, in all cities, with a public call for participants, mainly diffused by social networks. Regarding the composition of the focus groups, the people in charge of buying groceries for their own household were selected. They had to be fish consumers. People employed in agriculture, fisheries, food industry and market research were excluded. In addition, professional and semi-professional anglers were excluded, as were their relatives and researchers whose work related to fishery. Gender quotas were applied (two thirds women, one third men), in order to account for the gender asymmetry in purchasing decisions (e.g., Vanhonacker et al. 2013, Zander and Hamm 2010). As for the age profile, 35% of participants were below 30 and 37% over 50 years of age. Of these participants, 45% had a college or university degree. The participants were split almost equally between people who consume fish once a week or less and people who consume fish twice a week or more, with a very slight predominance of the latter category.

All the focus groups were headed by the same moderator and followed identical guidelines, in order to allow the homogenous consolidation of the information collected. A verbatim transcription of the records allowed catching the different nuances of the discussions.

The moderation guideline was divided into three parts. To channel the participants smoothly into the discussion, the first set of questions focused on actual purchasing behaviour and criteria. The second set of questions explored associations with several general concepts (sustainability, organic products). The third part specifically highlighted perceptions, knowledge and attitudes towards coastal fisheries. At the beginning of the discussion, the participants were asked to write down up to three associations with the subject. This way the first ideas could be gathered independently of group dynamics. Afterwards, the guideline explored participants' knowledge about, and understanding of, coastal fisheries. This was followed by an inquiry into the barriers and motives for preferring seafood originating from coastal fisheries. Finally, the interest in a coastal fisheries label were investigated. The transcripts were analysed using content analysis and by doing some ~~frequency~~ analysis on positive and negative associations by using R software.

2.2 Online survey

The quantitative online survey aimed at substantiating and quantifying the results of the qualitative focus groups. An online panel run by a private market research agency was used for purposive quota sampling. Quotas were set for gender relations (two thirds women and one third men), considering the fact that more women than men are still responsible for shopping (e.g., Vanhonacker et al. 2013, Zander and Hamm 2010). Representativeness was ensured with regard to age and regional distribution. All the participants had to be fish consumers.

The questionnaire contained sections on testing the participants' perception about coastal fisheries, their associations with coastal fisheries, and their attitudes towards a coastal fisheries label. Consumers' associations with 'coastal fisheries' were addressed by means of a numbered semantic differential scale containing 11 pairs. The order of the pairs was randomized. The participants' views on a coastal fisheries label and their expectations of possible attributes of the labelled products were investigated. In order to test for consumers' interest in a coastal fisheries label, their intention to use such a label was elicited by asking for the degree of agreement on the statement "I would use such a label in my purchase decision". According to Ajzen and Fishbein (2005: 188) "the intention to perform a behaviour, rather than attitude is the closest cognitive antecedent of actual behaviour performance". Therefore, buying behaviour, to a large extent, can be predicted from the answers regarding buying intentions. In order to be able to understand and explain consumers' attitudes towards a coastal fisheries' label, psychographic data, such as subjective knowledge of seafood, involvement with seafood and domain specific innovativeness were asked for. Subjective knowledge is the individual self-assessment of the knowledge that a person has about a product category (Altintzoglou et al., 2010), in our case seafood. Earlier research demonstrated that subjective knowledge influences fish consumption behaviour (e.g., Pieniak et al., 2010; Brunsø et al., 2009). Subjective knowledge of seafood in general was measured using three items: 'Compared to an average person I know a lot about seafood', 'I have a lot of knowledge about how to evaluate the quality of seafood', 'People who know me consider me as an expert in the field of seafood' (see also Pieniak et al., 2010). The second construct is food involvement which refers to the degree to which a person attaches concern, care and significance to a particular food product (Olsen, 2001). Involvement has been shown to be positively correlated

with fish consumption (Vanhonacker et al., 2011). Four items were used to capture this construct~~.~~: 'I am interested in where the seafood I eat comes from', 'I enjoy cooking seafood for others and myself', 'Making the right choice of seafood is important to me' and 'Seafood is an important part of my diet' (see also Birch and Lawley, 2014; Bell and Marshall, 2003; Olsen, 2001).

Consumer innovativeness is a construct which acknowledges varying consumers' willingness to try new products, which is a precondition for the introduction of new products to the market. Domain-specific innovativeness measures an individuals' innovative behavior with respect to a particular product category – in our case seafood (e.g., Bekoglu et al., 2016). It has been found to be an important predictor of purchase intention for farmed fish (Reinders et al., 2016). Domain-specific innovativeness was measured with three statements: 'In general, I am among the first in my circle to purchase new seafood products', 'In general, I would consider buying new seafood products' and 'In general, I am among the first in my circle to know the latest seafood product trends' (see also Reinders et al., 2016). The statements of all psychographic constructs were measured on a 5-point Likert scale ranging from 1 - 'I do not agree at all' to 5 - 'I totally agree' and were then merged into three scales by calculation the averages. Cronbach's alpha indicated high reliability in all cases (Table 1).

Table 1: Psychographic constructs and their reliability: subjective knowledge, involvement and domain-specific innovativeness (Cronbach's alpha)

Variable	France	Italy
Subjective knowledge	0.895	0.912
Involvement	0.791	0.853
Domain-specific innovativeness	0.892	0.832

In addition, sociodemographic data were elicited. The survey was developed in English and then translated into French and Italian by professional translation services. The content of the survey and the translations were discussed and reflected upon with the project partners in the respective countries. On average, the participants spent between 20 to 25 minutes to complete the survey.

Table 2~~:~~ Sample description online survey (% of test persons)

	France~~R~~	Italy~~T~~
Number of observations	499	504

Age of test persons		
18 to 24 years	9.0	6.7
25 to 34 years	20.8	18.8
35 to 44 years	22.8	25.4
45 to 54 years	19.8	19.4
55 to 70 years	27.5	29.6
Gender		
Female	62.1	64.5
Male	37.9	35.5
Education (years of school visit)		
No formal qualification	3.0	0.0
Secondary (GCSE or O-level)	16.0	12.3
High school (A-level)	38.3	53.2
University degree	42.7	34.5
Fish consumption		
Occasional fish consumers	48.1	32.7
Less than once per month	*12.6*	*3.4*
Once per month	*11.4*	*5.0*
Two to three times per month	*24.4*	*24.4*
Regular fish consumers	51.5	67.3
About once per week	*35.3*	*41.3*
More than once per week	*16.2*	*26.0*

Table 2~~1~~ shows the sample characteristics. The age distributions were representative for the study countries since they followed the quotas set beforehand. In comparison to census data, people with higher education (high school, university degree) were overrepresented in our data for both study countries. The dominance of higher educated people might be explained by the fact that only fish consumers were allowed to take part in the survey. Hicks et al. (2008) and Myrland et al. (2000) found that people with a higher education level tend to have higher fish consumption. Fish consumption frequency proved to be higher in Italy than in France.

3 Results and discussion

To ensure better readability, the results of the focus groups and of the online surveys are presented together, ordered by main topic. This section starts with consumers' perception of and associations with coastal fisheries, their perceptions and ideas of a coastal fisheries label and closes with consumers' willingness to use a coastal fisheries label.

3.1 Consumers' perception and associations of coastal fisheries

As shown by the focus groups, most of the participants felt familiar with the concept of coastal fisheries. However, almost none of them were able to give a precise definition of what coastal fisheries are. The participants' definition of coastal fisheries differed greatly from one person to another. Some of them perceived 'coastal' as a synonym for 'recreational fishing'. For other people it evoked 'traditional' fishing techniques, although they were at a loss to describe them. Another group associated 'coastal' with short-distance fishery. Even in this sub-group there was no common agreement about what short-distance means: being in sight of the coastline, one-day trip and a focus on 'local' species were the most frequent indications for distance. It is noteworthy that the participants' perception of distance did not relate to an objective standard (the distance from a generic shoreline). Instead, it depended on the participant's subjective experience: distance from where 'I' live, distance from where 'I' spend holidays, and so on. Because the actual meaning of the expression 'coastal fisheries' was ignored, people fuelled it with their own experiences, beliefs and thoughts: it is 'local', 'traditional", and 'holiday-related'. This was particularly the case for people living in non-coastal areas.

'For me coastal fishery means Cetara, a small port along the Amalfi coast, known for anchovy production, famous all around the world, also for the "colatura di alici' (FG, Salerno).

The focus groups revealed that, unlike other types of fishing, coastal fisheries were mainly perceived positively and as a better way to obtain fresh fish. Almost 60% of the participants highlighted positive environmental issues, but also high product quality, such as better food experience (35%) and higher freshness (25%) of coastal fisheries products.

Some participants underlined that freshness was best only if the fish was bought shortly after being caught. Coastal fisheries were associated with small quantities. Participants expected coastal fisheries to provide fresher products because of the short distance and short time of the fishing trip.

"'I would prefer coastal fisheries because in my head, I first think of something fresh whereas it is frozen, unfrozen otherwise. That is what I think when I see fish on stalls. The idea that fish is as fresh as fish mongers or the port can get is an attractive idea" (FG, Brest)."

In addition, participants presumed a greater variety of available species, so a more tailored food experience. 'Artisanal', 'true' and 'original fishing' were other terms used by the participants to describe coastal fisheries. With all these criteria combined, coastal fisheries were perceived to be environmentally friendly. In particular, some participants felt that coastal fisheries were aligned with better resource management, with a lower carbon footprint, and with eco-friendly fishing techniques. Beyond their positive impact on the environment, they were considered as an economic activity that creates benefits for the local economy, since it is the livelihood of local fishermen and their families, bringing them jobs and employment.

Although coastal fisheries were mainly positively perceived in the focus groups, also negative elements were mentioned. Some participants were suspicious about the term coastal fisheries, similar to labels or organic fish. Also, some concerns were raised about the working conditions of fishermen and environmental issues like overfishing or fishing in polluted coastal waters. The last point was particularly stressed in Ancona, Italy. Coastal fisheries were sometimes seen as a fishing practice facing technical constraints, e.g., poorly equipped fishing vessels. The job of fishermen was supposed to be an intense occupation, even a dangerous one. Some participants (especially women with children) did not buy coastal fishery products due to the reluctance of family members, mainly children.

"I'm always forced to buy frozen fish, maybe imported and of which I don't know anything, but just because it's the only way to have my kids eat fish" (FG, Ancona).

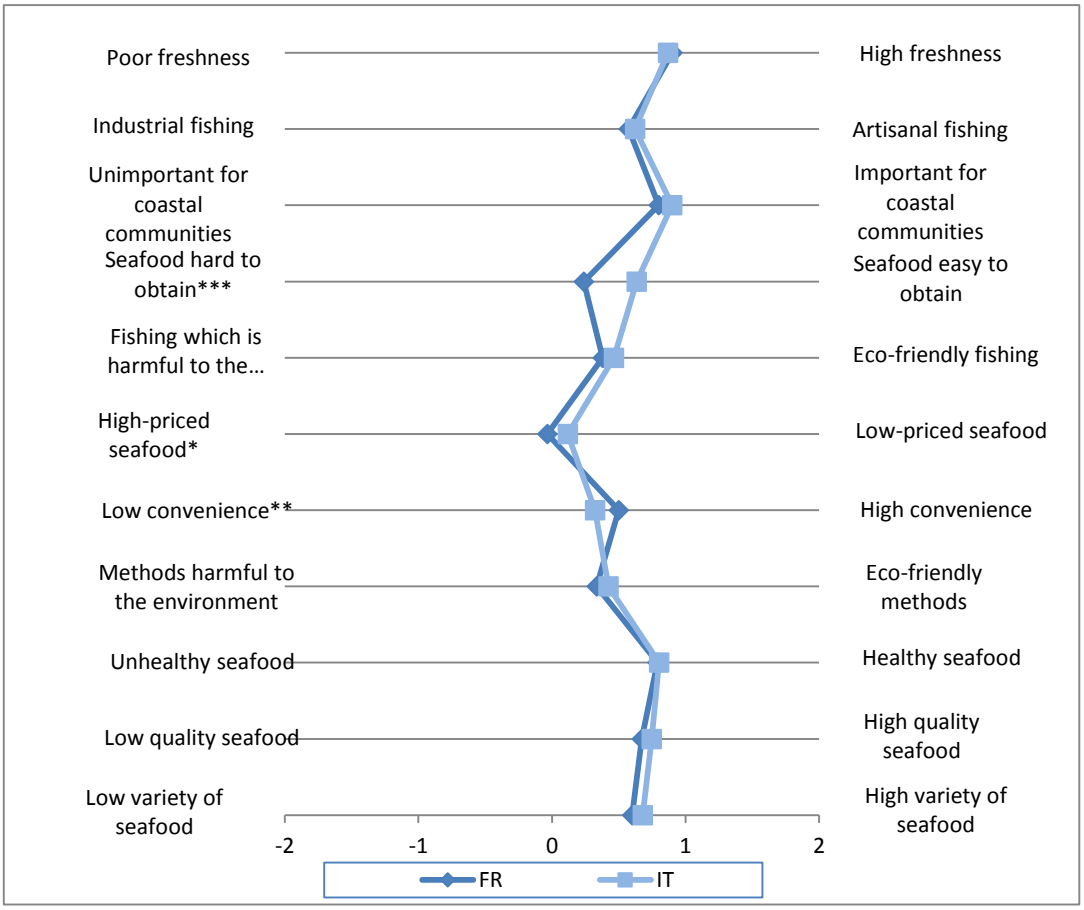
Other respondents simply declared that they were not informed enough. Thus, one major drawback regarding coastal fisheries mentioned by the participants, was a general lack of information and communication.

The diversity within the focus group discussions demonstrated the existence of two separate market segments of almost equal importance: the first segment is mainly driven by price and focuses on frozen and canned products, usually found in supermarkets; the second market segment is driven by consumers' explicit search for high quality by actively looking for freshness and for a relationship of confidence with the seller (often a fishmonger), and by avoiding the lowest prices. These purchasing motivations match well with the associations with (and expectations of) coastal fisheries. Some inconsistencies became obvious since most of the participants' positive feelings seemed to relate to "local" instead of "coastal". From a communication point of view and in the present state of consumers' awareness, coastal fisheries can be described as an operational concept: the largest number of people agree that it is a good concept but each person agrees for individual (and sometimes contradictory) reasons (Marcuse, 1964).

These qualitative results from the focus groups were quantified by the online survey. A differential semantic profile was developed in order to understand which consumers' associations with coastal fisheries are prevalent. The answers of the participants revealed a generally positive attitude toward coastal fisheries (Figure 1). Associations were particularly positive with respect to freshness, importance for coastal communities, healthiness and high quality, as well as a great variety of seafood, in both study countries. This substantiates the results of the focus groups. Between countries, differences were almost negligible with the exception of perceived availability (hard vs. easy to obtain), perceived price level and the degree of convenience. Availability was assumed to be better in Italy than in France; this might be due to geographic reasons and that a larger share of Italians live close to the sea. In France seafood from coastal fisheries was more often associated with higher prices. The French participants perceived coastal fisheries to be more convenient than Italians. On average, coastal fisheries were presumed to be eco-friendly.

Similar results have been reported before, and particularly for Italy high preferences for seafood from coastal fisheries were found (Zander and Feucht, 2019; Claret et al., 2012; Brécard et al., 2009).

Figure 1: Differential semantic profile for associations with coastal fisheries in France and Italy [1]



Question: What do you associate with coastal fisheries? Please choose a point on the scale accordingly.

* p= 0.5, ** p= 0.1, *** p = 0.01 (t-test for independent samples)

1 N - France = 499, Italy = 504

3.2 Consumer perceptions of a label for seafood from coastal fisheries

As outlined above, labels are an important means of communicating specific production conditions. Therefore, a large part of the present research focused on consumers' perceptions of a potential coastal fisheries label. During the focus group discussions, it became obvious that opinions on labelling in general and on coastal fisheries in detail varied widely. Some participants

perceived labels to be a sign of quality, whereas others saw it as a 'pledge of morality' frequently associated with higher prices.

"…it is a moral argument; it means that we know that we are going to buy something which is more ecological; and for that reason, it is more expensive" (FG, Paris).

A coastal fisheries label was mainly viewed as useful for marketing over longer distances, since consumers living far from the sea do not have the possibility of verifying the origin of the fish.

"For people who do not live near the coast it would be great to have fish labels because it would offer some additional guarantees. But we (live on the coast), we are in contact with sea and this area. For my part, it would bring me nothing but only pride maybe, but not a guarantee of quality" (FG, Dunkerque).

Participants of the focus groups questioned the 'credibility' of labels, asking if they could really be considered as a 'guarantee of quality'. They were not sure if they could place their trust in labels.

"If producers know that consumers are in favour of coastal fisheries, they could maybe find a way to introduce non-local products among the local products, and they might also try to raise prices" (FG, Ancona).

During the discussions, the participants expressed a clear demand for reliable information about: a) the catch date; b) the precise area of origin; and c) the fishing gear used. Interestingly, and despite the existence of official requirements on labelling relating to these aspects, traceability was generally perceived to be low by participants.

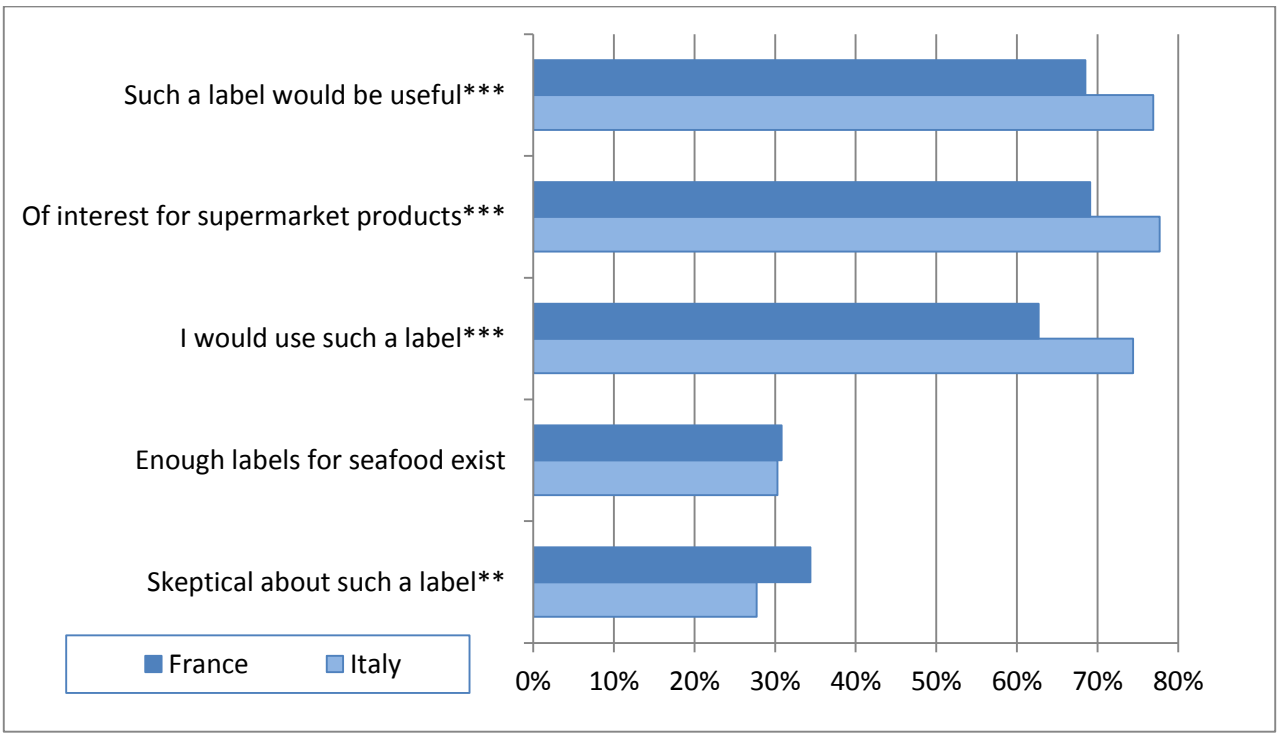
The information related to labels was mostly perceived to be unclear and/or difficult to access. As a result, through habit or because of greater trust, some participants declared they preferred getting the information directly from the fishmonger.

"Actually, I am also in favour of a label, a well-developed one and checked by an independent organisation, but… as Dorian said, there are some issues regarding traceability in the meat industry

so… it seems reasonable to think that there would also be concerns about honesty in the fish industry…" (FG, Brest).

The considerable diversity of opinions exhibited during the focus groups with respect to labelling in the context of coastal fisheries pointed to the necessity to look further into this issue in the quantitative step. The attitudes towards a coastal fisheries label were captured by asking participants to indicate their degree of agreement with five different items (Figure 2). In both study countries the majority of the participants were in favour of a coastal fisheries label. The participants in Italy, and to a slightly lesser extent in France, agreed that such a label would be useful, that it would be of particular interest for supermarket products, and that they would use such a label in their purchase decisions. Although the majority of participants in each country perceived a coastal fisheries label as useful, some scepticism about this kind of a label and the perception of already having enough labels relating to seafood were also expressed. On average, Italian consumers were more in favour of a coastal fisheries label and less sceptical than French consumers.

Figure 2: Attitudes towards a coastal fisheries label [1,2,3]



Question: What is your view on a coastal fisheries label?

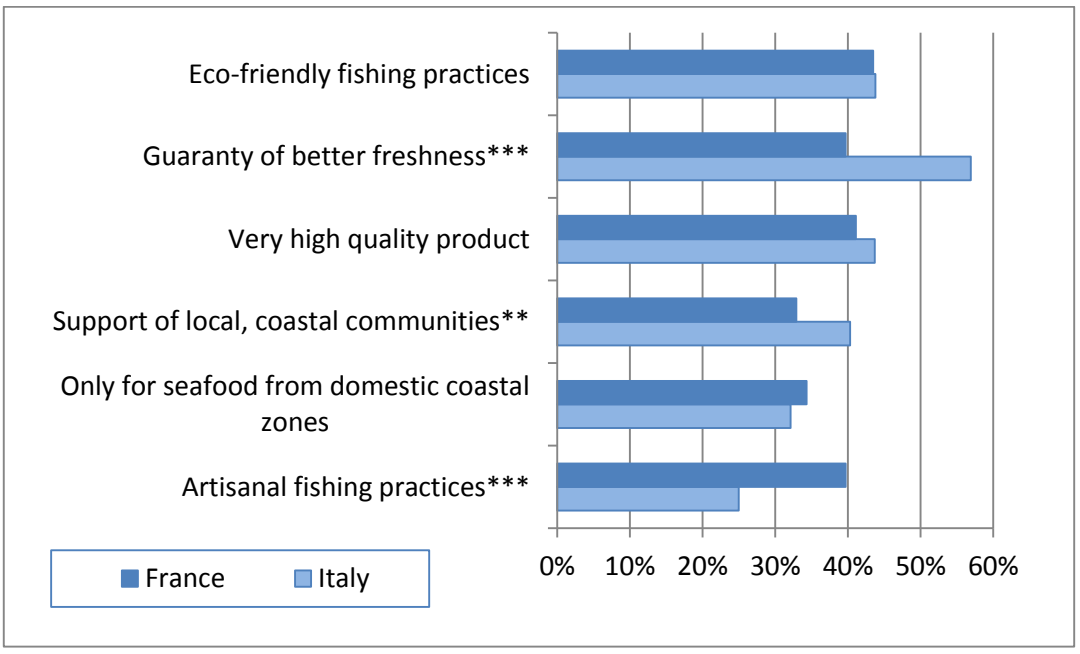
~~1~~2 Share of participants who chose either 'I agree' or 'I totally agree'. Measured on a 5-point Likert scale ranging from 'I do not agree at all' to 'I totally agree'. Scores of 4 'I agree' and 5 'I totally agree' were merged and classified as important.

3 N - France~~R~~ = 499, Italy~~T~~ = 504

~~2~~4 Differences are significant according to Chi-Square test of Independence (** p = 0.05, *** p = 0.001)

When thinking about a label for communication with consumers, consumer expectations of that specific kind of label should be considered. For this reason, the participants were asked about their expectations of a coastal fisheries label (Figure 3). Some interesting differences between the two study countries became obvious: while in Italy 'greater freshness' was by far the most important expectation, followed by quality and taste, in France eco-friendliness, quality, freshness and artisanal fishing practices were almost equally important. Artisanal fishing practices were much less relevant in Italy than in France. About one third of both samples argued that a coastal fisheries label should only be applicable for seafood from domestic coastal zones. These results show the widely varying expectations consumers have regarding a coastal fisheries label within and even more between countries.

Figure 3: Expectations of a coastal fisheries label in France and Italy (% of participants) [1,2]



Question: Imagine the introduction of a label indicating that the seafood originates from coastal fisheries. What would you expect from such a label? Please indicate up to three expectations

1 N - France = 499, Italy = 504

2 Differences are significant according to Chi-Square test of Independence (** p = 0.05, *** p = 0.001)

3.3 Driving factors of consumers' intention to use a coastal fisheries label

The design of a label should be aligned as much as possible with the expectations of potential consumers in order to ensure their acceptance and market success. This requires better knowledge of the specific characteristics of potential consumers.

In this study, potential consumers are defined as those who stated an intention to use a coastal fisheries label. The intention to use the label was captured by the answer to the item 'I would use such a label' measured on a Likert scale (1-'I totally disagree' to 5-'I totally ~~agree'). This variable was converted into a binary variable by setting 4 and 5 to 1 and all the other values to zero. A bi~~nary logistic linear regression analysis was conducted with this binary dependent variable[2] (Table 32). Two different models were calculated for the two study countries, France and Italy. The explanatory variables included in the analysis were several sociodemographic variables, frequency of fish consumption, the psychographic constructs of subjective knowledge, domain-specific innovativeness and involvement, positive associations with coastal fisheries, and the expected content of a coastal fisheries label (Table 32).

It turned out that almost none of the sociodemographic variables had an influence on potential label use~~, just like fish consumption frequency~~. In France, higher household net income had a significant influence (p= 0.05 or 0.01 respectively). The missing significant impact of fish consumption frequ~~ency This last fin~~ding on the label use leads to the presumption that a coastal fisheries label might be of interest to true fish lovers as well as to r~~are fish eaters. Domain-specific inno~~vativeness and ~~inv~~olvement wasere significant with positive effects in both countries, domain-

[2] For the treatment of Likert scale variables as metric variable please see Sullivan and Artino (2013).

specific innovativeness had an effect only in France. The relevance of domain-specific innovativeness regarding the perspectives of newly introduced products in the market have been reported before (Bekoglu et al., 2016; Reinders et al., 2016). Also, involvement in seafood in general has proven to have a positive effect on fish consumption (Nam, 2020, Vanhonacker et al., 2011 and Olsen, 2001). In contrast, subjective knowledge of seafood had no impact on the potential use of a coastal fisheries label.

~~In line with the focus group findings, positive associations with coastal fisheries increase the intention to use a coastal fisheries label~~ (Table 3~~2~~).

Table 3~~2~~: Impact of various indicators on stated use of a coastal fisheries label (linear ~~regressionbinary logis~~tic regression)[1,2].

	France			Italy		
	coefficients			coefficients		
	non standardised	standardised beta	significance p-value	non standardised	standardised beta	significance p-value
(Constant Term)	1.495		0.000	1.721		0.000
Gender (0-male; 1-female)	-0.067	0.037	0.342	-0.069	-0.040	0.328
Age in years	0.029	0.044	0.312	0.027	0.041	0.336
Formal education	-0.061	-0.057	0.167	0.040	0.031	0.464
Household net income	0.029	0.081	0.048	0.005	0.014	0.734
Frequency of fish consumption	-0.510	-0.072	0.097	-0.001	-0.002	0.971
Subjective knowledge	-0.048	-0.054	0.345	-0.001	-0.001	0.987
Domain-specific innovativeness	0.191	0.164	0.006	0.018	0.015	0.802
Involvement	0.452	0.038	0.000	0.405	0.376	0.000
Expected attribute/content of coastal fisheries label						
Artisanal fishing practices	0.207	0.116	0.005	0.151	0.078	0.068
Eco-friendly fishing practices	0.166	0.094	0.022	0.211	0.125	0.003
The support of local, coastal communities	0.149	0.080	0.057	0.222	0.130	0.003
Better freshness guaranteed	0.151	0.084	0.043	0.037	0.022	0.618
A very high quality product	0.211	0.119	0.005	0.208	0.123	0.005
Origin from domestic coastal zones	0.322	0.175	0.000	0.322	0.180	0.000
R^2	0.291			0.230		

1 Dependent variable: 'I would use such a label'. Measured on a 5-point Likert scale ranging from 'I do not agree at all' to 'I totally agree'. Scores of 4 'I agree' and 5 'I totally agree' were merged and classified as important.

~~1~~2 N - France = 499, Italy = 504

Marked differences between both countries exist regarding the preferences for the content of a coastal fisheries label. In France, the intention to use a coastal fisheries label increased significantly when domestic origin, a high-quality product, artisanal fishing practices, eco-friendliness and ~~better freshness and a high-quality product as well~~ as do~~mestic origin were~~ the characteristics promoted by such a label. For Italy, attributes of a potential label such as the origin from ~~domestic coastal zoneseco-f~~riendly fishing practices, the support of local coastal communities, eco-frien~~dly~~ fishing practices an~~d a a high-quality product and again the origin~~ from domestic coastal zones increase th~~e intention to use the label. Greater freshness~~ was an issue only in France. The standardised values in the second and fifth column (table 3) show that domestic origin is most importan~~t, followe~~d by high quality productfresh~~ness and~~ ~~artisana~~l fishing in France and high quality and support of coastal communities and eco-friendly practices in Italy.

Although there are some differences regarding artisanal fishing practices, eco-friendliness and freshness, in both countries origin from domestic coastal zones is highly relevant for the intention to use such a label. The preference for the attributes 'local/coastal communities' and 'domestic origin' aligns well with the ongoing interest of consumers in locally produced food (Feldmann and Hamm, 2015; Bingen et al., 2010).

~~[illegible]~~

~~France and high quality and support of coastal communities in Italy.~~

These results suggest that highlighting the origin from coastal fisheries creates a positive connotation independently of pre-existing knowledge. Coastal fisheries have a positive image, as highlighted by the focus groups.

4 Conclusions

The results of both research steps, the focus groups and the online survey showed that consumers in France and in Italy generally hold a positive view of coastal fisheries. The participants particularly appreciated the assumed high-quality of seafood from coastal fisheries as well as the economic benefits for coastal communities. Furthermore, they acknowledged the eco-friendliness of coastal fisheries and a broad variety of (artisanal) products.

Thus, highlighting the origin of seafood from coastal fisheries seems to be a promising approach for the two study countries France and Italy. Stressing the origin of seafood from domestic coastal areas should be part of any coastal fisheries communication concept. In addition, in France high quality productfreshness and artisanal production should be highlighted while in Italy environmental friendliness and the support of local, coastal communities should be emphasised. This information might be combined with some background information or stories about the particular area or communities and fishing traditions or specific artisanal fishing practices in France.

Most prominent way to communicate specific process qualities with food to consumers are labels. When thinking about introducing a new (sea-)food label to the market, attention has to be paid to the considerable array of already existing labels and the 'label fatigue' of many consumers (e.g., Jaffry et al., 2016). A label for coastal fisheries will be seen by consumers as a specific form of sustainability label and will probably compete with other labels such as the organic label, the Marine Stewardship Council label or the Label Rouge in France (see also Zander and Feucht, 2019). A prerequisite for the success of a labelling approach is that the seafood products must fully comply with consumer expectations as described above.

Although at least a fraction of consumers prefers seafood from coastal fisheries or intend to buy it, at the point-of-sale purchase behaviour depends on various factors, such as knowledge of its content and trust in the label and the well-tailored form of consumer communication used. This is particularly important, since the concepts of sustainability and coastal fisheries are demanding and high cognitive effort is needed to understand these concepts (Richter and Klöckner, 2017). The introduction of a label for coastal fisheries challenges consumers and adds to the risk of increasing the information overload of some consumers. It is important to accompany the introduction of a coastal fisheries label by well-targeted information campaigns for consumers as well as for the staff

488 at the point of sale. This way, also potential confusion about an additional label on seafood
489 products can be reduced.

490 The mix of qualitative and quantitative research applied in this study proved to be very helpful for
491 this topic where knowledge was previously lacking. The qualitative focus groups served as an
492 exploratory step and helped to provide an idea about the array of existing consumer opinions on
493 coastal fisheries. With the subsequent quantitative step, relative preferences could be identified
494 and an initial idea about consumers' interest in a coastal fisheries label and relevant factors were
495 revealed.

496 In this study, the intention to use the label was taken as a dependent variable. Intention to use and
497 real use or purchasing are not identical and several factors may cause a gap between intention and
498 behaviour (Richter and Klöckner, 2017). Although intention is an important predictor of behaviour,
499 experiments focussing on purchase behaviour might be an even better predictor of behaviour and
500 should be considered in future research. This research should also find answers to the questions
501 of how a coastal fisheries label can be designed, how it should be communicated with the product
502 itself, and which kind of further or background information would be needed to increase the use
503 of this kind of label.

504 The question remains as whether the labelling approach would be sufficient to enable coastal
505 fisheries survive? Or are there any further measures needed to support coastal fisheries? Although
506 this study indicates that consumer preferences for seafood from coastal fisheries exist,
507 communication remains challenging, particularly over longer geographical and organisational
508 distances. Against this backdrop, it is questionable if consumers' preferences and additional
509 willingness to pay at the point of sale will be sufficient to secure the survival of coastal fisheries in
510 the medium to long term.

511 Coastal fisheries have been described as fishing practices that are worthwhile protecting due to
512 the public benefits they provide. In this situation, facilitating and increasing consumer demand is
513 only one of several approaches. In addition, a decisive public support strategy for coastal fisheries
514 is needed to securely maintain the variety of traditions and techniques associated with coastal
515 fisheries.

Acknowledgements

We would like to thank Anne Helene Pringent-Simonin (IUT GEA, University of Brest), Frédérique Alban (AMURE, University of Brest), Estelle Masson (LP3C University of Brest), Carlo Paolucci (NISEA, Salerno) and Sara Bonanomi (CNR/IRBIM, Ancona) for their support in organizing and conducting the focus groups in France and Italy. Our thanks also go to two anonymous reviewers who helped to improve the quality of the manuscript largely.

Funding

This work was funded by the European Union's Horizon 2020 research and innovation program under grant agreement No 635188.

References

Ajzen, I., Fishbein, M., 2005. The influence of attitudes on behavior, in Albarracín, D., Johnson, B.T., Zanna, M.P. (Eds.), The handbook of attitudes. Mahwah, NJ: Lawrence Erlbaum Associates, pp. 173–221.

Altintzoglou, T., Verbeke, W., Vanhonacker, F., Luten, J., 2010. The image of fish from aquaculture among Europeans: Impact of exposure to balanced information. Journal of Aquatic Food Production Technology. 19, 103-119. https://doi.org/10.1080/10498850.2010.492093.

Barclay, K., Miller, A., 2018. The sustainable seafood movement is a governance concert, with the audience playing a key role. Sustainability 10(180). https://doi:10.3390/su10010180

Bekoglu, F.B., Ergen, A., Inci, B., 2016. The impact of attitude, consumer innovativeness and interpersonal influence on functional food consumption. International Business Research. 9:79-87. https://doi.org/10.5539/IBR.V9N4P79.

Bell, R., Marshall, D.W., 2003. The construct of food involvement in behavioral research: scale development and validation. Appetite. 40, 235-244. https://doi.org/10.1016/s0195-6663(03)00009-6.

Bertrand, J.T., Brown, J.E., Ward, V.M., 1992. Techniques for analyzing focus group data. Evaluation Review. 16, 198-209. https://doi.org/10.1177%2F0193841X9201600206.

544 Bingen, J., Sage, J., Sirieix, L., 2010. Consumer coping strategies: a study of consumers committed
545 to eating local. International Journal of Consumer Studies. 35, 410-419.
546 https://doi.org/10.1111/j.1470-6431.2010.00949.x.
547 Birch, D., Lawley, M.A., 2014. The influence of food involvement on fish consumption. Proceedings
548 of the 2014 Academy of Marketing Conference, 7–10 July, 2014, Bournemouth.
549 Bladon, A.J., Short, K.M., Mohammed, E.Y., Milner-Gulland, E.J., 2016. Payments for ecosystem
550 services in developing world fisheries. Fish & Fisheries, 17, 839–859. https://doi:
551 10.1111/faf.12095.
552 Brécard, D., Hlaimi, B., Lucas, S., Perraudeau, Y., Salladarré, F., 2009. Determinants of demand for
553 green products: An application to eco-label demand for fish in Europe. Ecological Economics.
554 69, 115-125. https://doi.org/10.1016/j.ecolecon.2009.07.017.
555 Bronnmann, J., Asche, F., 2017. Sustainable seafood from aquaculture and wild fisheries: Insights
556 from a discrete choice experiment in Germany. Ecological Economics. 142, 113-119.
557 https://doi.org/10.1016/j.ecolecon.2017.06.005.
558 Brunsø, K., Verbeke, W., Olsen, S.O., Jeppesen, L.F., 2009. Motives, barriers and quality evaluation
559 in fish consumption situations. Exploring and comparing heavy and light users in Spain and
560 Belgium. British Food Journal. 111, 699-716. https://doi.org/10.1108/00070700910972387.
561 Carlucci, D., Nocella, G., De Devitiis, B., Viscecchia, R., Bimbo, F. and Nardone, G., 2015. Consumer
562 purchasing behaviour towards fish and seafood products. Patterns and insights from a sample
563 of international studies. Appetite. 84, 212-227. https://doi.org/10.1016/j.appet.2014.10.008.
564 Caswell, J.A., Mojduszka, E.M., 1996. Using information labelling to influence the market for quality
565 in food products. American Journal of Agricultural Economics. 78, 1248-1253.
566 Claret, A., Guerrero, L., Aguirre, E., Rincón, L., Hernández, M.D., Martínez, I., Benito Peleteiro, J.,
567 Grau, A., Rodríguez-Rodríguez, C., 2012. Consumer preferences for sea fish using conjoint
568 analysis: Exploratory study of the importance of country of origin, obtaining method, storage
569 conditions and purchasing price. Food Quality and Preference. 26, 259–266.
570 https://doi.org/10.1016/j.foodqual.2012.05.006.
571 Crona, B.I., Basurto, X., Squires, D., Gelcich, S., Daw, T.W., Khan, A., Havice, E., Chomo, V., Troell,
572 M., Buchary, E.A., Allison, E.H., 2016. Towards a typology of interactions between small-scale
573 fisheries and global seafood trade. Marine Policy. 65, 1-10.
574 http://dx.doi.org/10.1016/j.marpol.2015.11.016.

575 Daurès, F., 2018. The SUCCESS Project - The “Coastal Fisheries” case study. https://www.umr-
576 amure.fr/wp-content/uploads/2019/05/2_Daures_Success-coastal-Fisheries.pdf (accessed 23
577 March 2020).
578 Davies, P., Williams, C., Carpenter, G., Beukers-Stewart, B.D., 2018. Does size matter? Assessing
579 the use of vessel length to manage fisheries in England. Marine Policy. 97, 202-210.
580 http://dx.doi.org/10.1016/j.marpol.2018.06.013.
581 EU, 2013. Regulation No 1380/2013 of the European Parliament and the Council of 11 December
582 2013 on the Common Fisheries Policy. Official Journal of the European Union, L 354/22.
583 Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013R1380.
584 (accessed 01 May 2020).
585 EUMOFA, 2020. The EU Fish market. https://www.eumofa.eu/market-analysis (accessed 16 March
586 2021).
587 FAO, 2020. The state of Mediterranean and Black Sea Fisheries 2020. General Fisheries Commission
588 for the Mediterranean. Rome. https://doi.org/10.4060/cb2429en (accessed 12 January 2021).
589 Feldmann, C., Hamm, U., 2015. Consumers' perceptions and preferences for local food: A review.
590 Food Quality and Preference. 40, 152-164. https://doi.org/10.1016/j.foodqual.2014.09.014.
591 Finch, L., Lewis, J., Turley, C., 2014. Focus groups, in Ritchie, J., Lewis, J., McNaughton Nicholls, C.,
592 Ormston, R. (Eds.), Qualitative research practice - a guide for social science students and
593 researchers. 2nd ed. Sage Publication Ltd. London, Thousand Oaks, New Delhi, Singapore. pp.
594 211-242
595 Frawley, T.H., Finkbeiner, E., Crowder, L.B., 2019. Environmental and institutional degradation in
596 the globalized economy: lessons from small-scale fisheries in the Gulf of California. Ecology
597 and Society. 24(1),7. https://doi.org/10.5751/ES-10693-240107.
598 Guyader, O., Berthou, P., Koutsikopoulos, C., Alban, F., Demanèche, S., Gaspar, M.B., Eschbaum,
599 R., Fahyg, E., Tully, O., Reynali, L., Curtild, O., Frangoudes, K., Maynou, F., 2013. Small scale
600 fisheries in Europe: A comparative analysis based on a selection of case studies. Fisheries
601 Research. 140, 1-13. https://doi.org/10.1016/j.fishres.2012.11.008.
602 Halkier, B., 2010. Focus groups as social enactments: integrating interaction and content in the
603 analysis of focus groups data. Qualitative Research. 10, 71–89.
604 https://doi.org/10.1177%2F1468794109348683.

605 Hicks, D., Pivarnik, L., McDermott, R., 2008. Consumer perceptions about seafood — An internet
606 survey. Journal of Foodservice. 19, 213–226. https://doi.org/10.1111/j.1748-
607 0159.2008.00107.x.
608 Jaffry, S., Glenn, H., Ghulam, Y., Willis, T., Delanbanque, C., 2016. Are expectations being met?
609 Consumer preferences and rewards for sustainably certified fisheries. Marine Policy. 73, 77-
610 91. http://dx.doi.org/10.1016/j.marpol.2016.07.029.
611 Jaffry, S., Pickering, H., Ghulam,Y., Whitmarsh, D., Wattage, P., 2004. Consumer choices for quality
612 and sustainability labelled seafood products in the UK. Food Policy. 29, 215–228.
613 https://doi:10.1016/j.foodpol.2004.04.001.
614 Josupeit, H., 2016. Small-scale fisheries markets: value chain, promotion and labelling, European
615 Parliament - Directorate-General for internal policies - Policy Department B: Structural and
616 cohesion policies - Fisheries - Research for PECH Commitee: 62p.
617 https://research4committees.blog/2016/04/15/small-scale-fisheries-markets-value-chain-
618 promotion-and-labelling/ (accessed 16 March 2021).
619 Kalshoven, K., Meijboom, F.L.B., 2013. Sustainability at the crossroads of fish consumption and
620 production. Ethical dilemmas of fish buyers of retail organisations in the Netherlands. Journal
621 of Agricultural and Environmental Ethics. 26, 101–117. https://doi:10.1007/s10806-011-9367-
622 6.
623 Lloret, J., Cow, J.B., Cabral, H., Castro, M., Font, T., Gonçalves, J.M.S., Gordo, A., Hoefnagel, E.,
624 Matić-Skoko, S., Mikkelsen, E., Morales, B., Dimitrios, N., Moutopoulos, D.K., Muñoz, M., dos
625 Santos, M.N., Pintassilgo, P., Pita, C., Stergiou, K.I., Ünal, V., Veiga, P., Erzini, K., 2018. Small-
626 scale coastal fisheries in European Seas are not what they were: Ecological, social and
627 economic changes. Marine Policy. 98, 176-186.
628 https://doi.org/10.1016/j.marpol.2016.11.007.
629 Marcuse, H., 1964. One-dimensional man: Studies in the ideology of advanced industrial society.
630 Beacon Press, Boston.
631 Menozzi, D., Thong Tien, N., Sogari, G., Taskov, D., Lucas, S., Santiago Castro-Rial, J., Mora, C., 2020.
632 Consumers' preferences and willingness to pay for fish products with health and
633 environmental labels: Evidence from five European countries. Nutrients. 12(9), 2650.
634 https://do.i.org/10.3390/nu12092650.

635 Myrland, O., Trondsen, T., Johnston, R.S., Lund, E., 2000. Determinants of seafood consumption in
636 Norway: lifestyle, revealed preferences, and barriers to consumption. Food Quality and
637 Preference. 11, 169-188. https://do.i.org/10.1016/S0950-3293(99)00034-8.
638 Nam, S.J., 2020. Moderating effects of consumer empowerment on the relationship between
639 involvement in eco-friendly food and eco-friendly food behaviour. Journal of Consumer
640 Studies. 44, 297-305. https://doi.org/10.1111/ijcs.12568.
641 OECD, 2006. Using market mechanisms to manage fisheries. Smoothing the path. OECD, Paris,
642 2006.
643 http://www.oecd.org/greengrowth/fisheries/usingmarketmechanismstomanagefisheriessmo
644 othingthepath.htm (accessed 16 March 2021).
645 Olesen, I., Alfnes, F., Røra, M.B., Kolstad, K., 2010. Eliciting consumers' willingness to pay for
646 organic and welfare-labelled salmon in a non-hypothetical choice experiment. Livestock
647 Science. 127, 218–226. https://doi.org/10.1016/j.livsci.2009.10.001.
648 Olsen, S.O., 2001. Consumer involvement in seafood as family meals in Norway: an application of
649 the expectancy-value approach. Appetite. 36, 173-186.
650 https://doi.org/10.1006/appe.2001.0393.
651 Pascual-Fernández, J.J., Pita, C., Josupeit, H., Said, A., Garcia Rodrigues, J., 2019. Markets,
652 distribution and value chains in small-scale fisheries: A special focus on Europe, in
653 Chuenpagdee, R., Jentoft, S. (Eds.), Transdisciplinary for small-scale fisheries governance.
654 Springer International Publishing AG. pp. 141-162.
655 Pieniak, Z., Verbeke, W., Olsen, S.O., Hansen, K.B., Brunsø, K., 2010. Health-related attitudes as a
656 basis for segmenting European fish consumers. Food Policy. 35, 448-455.
657 http://dx.doi.org/10.1016/j.foodpol.2010.05.002.
658 Pita, C., Pereira, J., Lourenco, S., Sonderblohm, C., Pierce, G.J., 2015. The traditional small-scale
659 Octopus fishery in Portugal: Framing its governability, in Jentoft, S., Chuenpagdee, R. (Eds.),
660 Interactive governance for small-scale fisheries. Cham, Springer International Publishing. pp.
661 117-134. https://doi.org/10.1007/978-3-319-17034-3_7.
662 Prosperi, P., Kirwan, J., Maye, D., Bartolini, F., Vergamini, D., Brunoir, G., 2019. Adaptation
663 strategies of small-scale fisheries within changing market and regulatory conditions in the EU.
664 Marine Policy. 100, 316-323. https://doi.org/10.1016/j.marpol.2018.12.006.

Reinders, M.J., Banovic, M., Guerrero, L., Krystallis, A., 2016. Consumer perspectives of farmed fish. British Food Journal. 118, 2581-2597. https://doi.org/10.1108/BFJ-03-2016-0097.

Richter, I.G.M., Klöckner, C.A., 2017. The psychology of sustainable seafood consumption: A comprehensive approach. Foods, 6, 86. https://doi:10.3390/foods6100086

Rousseau, Y., Watson, R.A., Blanchard, J.L., Fulton, E.A., 2019. Defining global artisanal fisheries. Marine Policy. 108, 103634. https://doi.org/10.1016/j.marpol.2019.103634.

Ryan, K.E., Gandha, T., Culbertson, M.J., Carlson, C., 2014. Focus group evidence: Implications for design and analysis. American Journal of Evaluation. 35, 328-345. https://doi.org/10.1177%2F1098214013508300.

Said, A., Chuenpagdee, R., 2019. Aligning the sustainable development goals to the small-scale fisheries guidelines: A case for EU fisheries governance. Marine Policy. 107, 103599. https://doi.org/10.1016/j.marpol.2019.103599.

Salladaré, F., Guillotreau, P., Debucquet, G., Lazuech, G., 2018. Some good reasons for buying fish exclusively from community-supported fisheries: The case of Yeu Island in France. Ecological Economics. 153, 172-180. https://doi.org/10.1016/j.ecolecon.2018.07.017

Schuhbauer, A., Chuenpagdee, R., Cheung, W.W.L., Greer, K., Sumailaa, U.R., 2017. How subsidies affect the economic viability of small-scale fisheries. Marine Policy. 82, 114-121. https://doi.org/10.1016/j.marpol.2017.05.013.

Solomon, M., Bamossy, G., Askegaard, S., Hogg, M.K., 2010. Consumer behaviour. A European perspective (4th ed.) Prentice Hall, Harlow.

Soltanpour, Y., Monaco, C., Peri, I., 2017. Defining small-scale fisheries from a social perspective. Quality-Access to Success. 18, 425-430.

STECF, 2020. The 2020 Annual economic report on the EU Fishing Fleet (STECF 20-06), Publications Office of the European Union, Luxembourg. https://doi: 10.2760/50052.

Sullivan, G.M., Artino, A.R., 2013. Analyzing and interpreting data from Likert-Type scales. Journal of Graduate Medical Education, Dec, http://dx.doi.org/10.4300/JGME-5-4-18.

Teh, L., Pauly, D., 2018. Who brings in the fish? The relative contribution of small-scale and industrial fisheries to food security. Frontiers in Marine Science. 5, 9. https://doi.org/10.3389/fmars.2018.00044.

Teisl, M.F., Roe, B. and Levy, A.S., 1999. Ecocertification: Why it may not be a ”Field of Dreams“. American Journal of Agricultural Economics. 81, 1066-1071. https://doi.org/10.2307/1244085.

Vanhonacker, F., Altintzoglou, T., Luten, J., Verbeke, W., 2011. Does fish origin matter to European consumers? Insights from a consumer survey in Belgium, Norway and Spain. British Food Journal. 113, 535-549. http://dx.doi.org/10.1108/00070701111124005.

Vanhonacker, F., Van Loo, E.J., Gellynck, X., Verbeke, W., 2013. Flemish consumer attitudes towards more sustainable food choices. Appetite. 62, 7-16. http://dx.doi.org/10.1016/j.appet.2012.11.003.

Wahlen, S., Dubuisson-Quellier, S., 2018. Consumption governance toward more sustainable consumption. Journal of Family & Consumer Sciences 110(1), 7-12, https://doi.org/10.14307/JFCS110.1.7.

Whitmarsh, D., Palmieri, M.G., 2011. Consumer behaviour and environmental preferences: A case study of Scottish salmon aquaculture. Aquaculture. 42, 142–147. https://doi:10.1111/j.1365-2109.2010.02672.x.

World Bank, 2017. The Sunken Billions Revisited – Progress and challenges in global marine fisheries, 117p. https://openknowledge.worldbank.org/handle/10986/24056 (accessed 16 March 2021).

Zander, K., Feucht, Y., 2019. Consumers' willingness to pay for sustainable seafood made in Europe. Journal of International Food & Agribusiness Marketing. 30,251-275. https://doi.org/10.1080/08974438.2017.1413611.

Zander, K., Hamm, U., 2010. Consumer preferences for additional ethical attributes of organic food. Food Quality and Preference. 21, 495-503. https://doi.org/10.1016/j.foodqual.2010.01.006.

Appendix: Psychographic constructs and corresponding items

Construct	Items
Subjective knowledge	- Compared to an average person I know a lot about seafood - I have a lot of knowledge about how to evaluate the quality of seafood

	- I have a lot of knowledge about how to evaluate the quality of seafood', - People who know me consider me as an expert in the field of seafood
Food involvement	- I am interested in where the seafood I eat comes from - I enjoy cooking seafood for others and myself - Making the right choice of seafood is important to me - Seafood is an important part of my diet
Domain-specific innovativeness	- In general, I am among the first in my circle to purchase new seafood products - In general, I would consider buying new seafood products - In general, I am among the first in my circle to know the latest seafood product trends

722

723

Author contributions

Use this form to specify the contribution of each author of your manuscript. A distinction is made between five types of contributions: Conceived and designed the analysis; Collected the data; Contributed data or analysis tools; Performed the analysis; Wrote the paper.

For each author of your manuscript, please indicate the types of contributions the author has made. An author may have made more than one type of contribution. Optionally, for each contribution type, you may specify the contribution of an author in more detail by providing a one-sentence statement in which the contribution is summarized. In the case of an author who contributed to performing the analysis, the author's contribution for instance could be specified in more detail as 'Performed the computer simulations', 'Performed the statistical analysis', or 'Performed the text mining analysis'.

If an author has made a contribution that is not covered by the five pre-defined contribution types, then please choose 'Other contribution' and provide a one-sentence statement summarizing the author's contribution.

Manuscript title: **Consumer perspectives on coastal fisheries and product labelling in France and Italy**

Author 1: Katrin Zander

☒ Conceived and designed the analysis
Specify contribution in more detail (optional; no more than one sentence)

☐ Collected the data
Specify contribution in more detail (optional; no more than one sentence)

☒ Contributed data or analysis tools
Specify contribution in more detail (optional; no more than one sentence)

☒ Performed the analysis
Specify contribution in more detail (optional; no more than one sentence)

☒ Wrote the paper
Specify contribution in more detail (optional; no more than one sentence)

☐ Other contribution
Specify contribution in more detail (required; no more than one sentence)

Author 2: Fabienne Daurès

- ☐ Conceived and designed the analysis
  Specify contribution in more detail (optional; no more than one sentence)
- ☒ Collected the data
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Contributed data or analysis tools
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Performed the analysis
  Specify contribution in more detail (optional; no more than one sentence)
- ☒ Wrote the paper
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Other contribution
  Specify contribution in more detail (required; no more than one sentence)

Author 3: Yvonne Feucht

- ☒ Conceived and designed the analysis
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Collected the data
  Specify contribution in more detail (optional; no more than one sentence)
- ☒ Contributed data or analysis tools
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Performed the analysis
  Specify contribution in more detail (optional; no more than one sentence)
- ☒ Wrote the paper
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Other contribution
  Specify contribution in more detail (required; no more than one sentence)

Author 4: Loretta Malvarosa

- ☐ Conceived and designed the analysis
  Specify contribution in more detail (optional; no more than one sentence)
- ☒ Collected the data
  Specify contribution in more detail (optional; no more than one sentence)
- ☒ Contributed data or analysis tools
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Performed the analysis
  Specify contribution in more detail (optional; no more than one sentence)
- ☒ Wrote the paper
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Other contribution
  Specify contribution in more detail (required; no more than one sentence)

Author 5: Claudio Pirrone

- ☐ Conceived and designed the analysis
  Specify contribution in more detail (optional; no more than one sentence)
- ☒ Collected the data
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Contributed data or analysis tools
  Specify contribution in more detail (optional; no more than one sentence)
- ☒ Performed the analysis
  Specify contribution in more detail (optional; no more than one sentence)
- ☒ Wrote the paper
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Other contribution
  Specify contribution in more detail (required; no more than one sentence)

Author 6: Bertrand Le Gallic

- ☒ Conceived and designed the analysis
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Collected the data
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Contributed data or analysis tools
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Performed the analysis
  Specify contribution in more detail (optional; no more than one sentence)
- ☒ Wrote the paper
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Other contribution
  Specify contribution in more detail (required; no more than one sentence)

Author 7: Enter author name

- ☐ Conceived and designed the analysis
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Collected the data
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Contributed data or analysis tools
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Performed the analysis
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Wrote the paper
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Other contribution
  Specify contribution in more detail (required; no more than one sentence)

Author 8: Enter author name

- ☐ Conceived and designed the analysis
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Collected the data
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Contributed data or analysis tools
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Performed the analysis
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Wrote the paper
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Other contribution
  Specify contribution in more detail (required; no more than one sentence)

Author 9: Enter author name

- ☐ Conceived and designed the analysis
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Collected the data
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Contributed data or analysis tools
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Performed the analysis
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Wrote the paper
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Other contribution
  Specify contribution in more detail (required; no more than one sentence)

Author 10: Enter author name

- ☐ Conceived and designed the analysis
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Collected the data
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Contributed data or analysis tools
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Performed the analysis
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Wrote the paper
  Specify contribution in more detail (optional; no more than one sentence)
- ☐ Other contribution
  Specify contribution in more detail (required; no more than one sentence)

Declaration of interests

☒ The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

☐The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: