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Title:

Emotions, Perceptions, and Resilience: Fishermen's Responses to Socio-Environmental Changes in Taranto, South of Italy

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ABSTRACT

Coastal small-scale fisheries are facing significant challenges from climate change, European Union fishery policies, and other ‘uses’ of the sea (Raicevich *et al.* 2020), such as wind farms, drills, and pipelines. In particular, little is understood about the impacts of offshore wind farms on marine resource dwellers in the South of Italy. By taking the first offshore wind farm of the Mediterranean in the Gulf of Taranto as a starting point of analysis, this work aims at unpacking the emotional responses and risk perceptions of fishermen under socio-environmental change and uncertain circumstances in the context of Taranto. Specifically, I argue that, in the context of Taranto, fishermen rely on the function of the sea, considering it as an identity marker that drove them to develop emotional involvement, specific sea-oriented expertise, and self-motivation to cope with change and uncertainty. Therefore, drawing attention to the sea is paramount to grasping how emotions, change processes, risk exposure, and resilience are interpreted, experienced, and produced. Based on three months of ethnographic fieldwork, this study draws on participant observation, small talks, spontaneous conversations, and semi-structured interviews with recreational, commercial, and professional fishermen. Among my interlocutors, disinterest, anger, and optimism/lack of optimism, emerged as affective reactions concerning the wind farm and further transformations within the broader change scenario. Furthermore, by examining the mutual interplay between emotions, change-related risk perceptions, and imaginations of the future, I demonstrate how ‘diversification’ and ‘social identity’ (Johnson *et al.* 2014) can be indicators of sociocultural resilience to cope with the perceived risks in the fishing-based community.

Keywords

Small-scale fishing · Emotions · Risk Perceptions · Change · Resilience · Wind Farm · Sustainability · Environment · Society

1 INTRODUCTION

In the city of Taranto, the sea has always had a crucial role in identity formation for its inhabitants, the *tarantini*¹. Indeed, the fishing and the mussel farming tradition has shaped the cultural, economic, and political profile of the city over the years, and both fishermen and mussel farmers have been placed at the center of its history. Throughout my research, I had the chance to gain an understanding of the role the proximity to the sea has played in the constitution of the city and how it has always been the main emphasis in most of my interviews and spontaneous conversations with recreational, commercial and professional fishermen, confirming its relevance:

“I was born and raised in Taranto and here, the sea is the only thing we have...”
[Cataldo, January 2023]

“The only salvation of Taranto is to return to living off the sea, certainly not in an old-fashioned way, but only in this way do we also recover our identity, because we, Taranto people, no longer feel part of this relationship with the sea” [Ignazio, December 2022]

“I know the seabed of Mar Piccolo like the insides of my own pockets, I can tell you exactly what is there” [Gerolamo, October 2022]

“Taranto is the city of the sea par excellence, it is, therefore, a shame that the ancient tradition of fishing is being lost” [Lorenzo, January 2023]

Small-scale fisheries [SSFs] in the coastal areas provide livelihood all over the world, especially in terms of offering new job opportunities and seafood products on the local, regional, and international markets (FAO 2018, xiv). In line with the most recent European definition of SSFs, “small-scale coastal fishing is carried out by marine and inland fishing vessels of an overall length of fewer than 12 meters and not using towed fishing gear, and by fishers on foot, including shellfish gatherers” [Regulation (EU) 2021/1139]. In particular, a larger number of small-scale fishing vessels are located in the Mediterranean, specifically in Greece, Croatia, and Italy (Grati and Perretta 2022). In many southern coastal areas of the latter, the economic system is still based on agricultural and fishing activities (Nicolosi et al. 2021). In the Apulia region, artisanal fishing constitutes more than half (52%) of the entire fishing fleet. Among the region's six maritime compartments, Taranto contributes 11% to Apulia's artisanal fisheries (Casola and Scordarella, n.d). Mediterranean fishing is a considerable example of traditional fishing, which provides an economic, social, and cultural resource to local communities (Idda et al. 2009), thus explaining why fishing has always been perceived as “an intrinsic part of the cultural landscape of the Mediterranean and Black sea countries” (FAO 2018, xiv). However, small-scale fishing communities are undergoing external and ever-increasing environmental and socioeconomic change-related tensions which are challenging their existence. Due to climate change, the marine ecosystem they thrive on is being subjected to rapid alterations and the economic and cultural aspect of fishing communities is being modified as a consequence (Frawley et al. 2019).

¹ *Inhabitans of Taranto*

As one of my interlocutors explained to me:

“For the past 3 or 4 years we have been noticing more tropical fish, which we have never seen here in Taranto. They are mostly predator fish, which used to be very rare, but now with climate change... When there are predatory fish you can't fish because all the fish we catch swim away because they are afraid” (Cosimo, October 2022)

According to a commercial fisherman, climate change has an impact on bird population as well:

“With the climate change, the cormorants arrived here... but it's a bit of a problem because they eat a lot of fish and for the fishermen, it's not so good you know... they used to come but then emigrate, now they stay longer...” (Vincenzo, January 2023).

The concept of Local Ecological Knowledge (LEK), which results from that process of *enskillment* theorized by Tim Ingold (2000), implies that “all small-scale fishers develop intimate, detailed, and functionally-oriented knowledge of the marine ecosystems they exploit” (McDoodwin 2001, 19). Specifically, LEK consists of recognizing the temporal circumstances surrounding the reachability of certain species, as well as developing a determined set of fishing and conservation methods. Moreover, perceptions of socio-ecological change and risk fishermen have are closely related to their knowledge about fish and their environments. Therefore, LEK may also trigger and heighten certain emotions as a consequence of factors they perceive as threats or benefits to the sea and their fishing activity. As Ounanian (2016) states: “change, the process, and its outcomes, can bring out strong emotions, feelings of loss” (2016, 1). In this perspective, I argue that drawing attention to the function the sea takes on in the context of Taranto, looking at it as an identity feature that led fishermen to develop specific sea-oriented expertise and the resulting intangible cultural heritage, helps to gain a better understanding of how emotions, processes of change and risk exposure are being experienced and perceived. Following Böhm’s studies (2003, 2008), which investigated emotional reactions to environmental risk, I further suggest that emotive responses give an idea of how change-related risk and uncertainty are sensed and lived. Therefore, I argue that these emotions and perceptions are rooted in the intense and mutual interaction of fishermen with the maritime environment they thrive on and the knowledge of the sea that derives from it. This profound connection to nature and the resulting fishermen's social identity were found also as important elements in determining my interlocutor’s resilience.

The ‘uses’ of the sea, such as wind farms, drills, and pipelines, are one of the factors that pose a potential threat to the fishing community. To respond to climate change, the sector of renewable energies has increased exponentially. In this scenario, the presence of actors aimed at using the marine space for climate purposes might represent a further challenge fishermen possibly have to confront (ten Brink and Dalton 2018; M.A.R.E. Soc. Coop. a.r.l., 2021; Farella et al., 2021; Grati and Perretta 2022). From this perspective, this work starts by exploring fishermen’s perceptions of the wind farm in the Gulf of Taranto, named Beleolico. This megaproject was launched in April 2022, and it is made up of ten wind turbines located along the poly-sectorial pier in front of the Ilva steel plant. It has a combined capacity of 30 megawatts to generate enough power to meet the requirements of 60,000 people for a whole year. Since the construction was very recent when I arrived in the field, I expected it to be considered the main source of opinions and

feelings among locals, including my interlocutors. Nevertheless, the more I dived into the field, the less the wind farm was mentioned or even known, particularly among the inhabitants and recreational fishermen. Eventually, the installation turned out to be only one of the several sources that brought out affective conditions among fishermen during the broader ongoing environmental and socio-economic changes.

The significant function that various emotions played in conversations informed my knowledge and motivated me to choose to concentrate on emotions as the main theme and thread of this work. Indeed, the emphasis on emotions resulted in a beneficial lens to gain an understanding of how fishermen make sense of the changes they are undergoing. Following Andrews *et al.* (2021), the contribution of emotional research can be found in shedding light on the connection of emotions with other psychosocial factors that affect fishermen's behaviors, such as perceptions and values. By unpacking the wide spectrum of fishermen's emotions when their seagoing traditions may be altered or lost to the next generations, the purpose of this research is, therefore, to investigate the socio-ecological perceptions of change-related risk among commercial, recreational, and professional fishermen² and how their impressions and emotive responses can develop or limit certain adaptive planning. Indeed, emotions are not neutral elements in defining resilience (Fredrickson's 1998, 2001, 2003).

This thesis is structured as followed; in the first part, I situate my work within the existing anthropological literature on the nature-human dichotomy debate, taking on board the 'dwelling perspective' of Tim Ingold (2000) and moving further to the socio-ecological systems model where issues related to vulnerability, resilience, and adaptive capacity arise. Secondly, a deep look at the role of emotions in risk perceptions and adaptive behaviors is illustrated, followed by a brief discussion on methods and positionality in the field. In the first chapter of the ethnographic analysis, I outline the ethnographic setting and delve into the emotional field of my interlocutors, taking the recent installation of Beleolico as a starting point of analysis. Subsequently, I move on and outline how these emotions, perceived risk, and future scenarios can encourage or limit their attitude to change in the present, showing how environment-related emotions were key components in defining their resilience. I use Adger's (2000) well-known definition of resilience to frame my interlocutor's coping strategies as the result of facing external pressures and disturbances brought on by social and environmental change. Resilience is the key factor that allows a community to adapt to increasing modern conditions. Nevertheless, by following McGoodwin (2001), although culture is also adaptive and capable of changing with changing circumstances, a culture change that occurs too rapidly can be a source of harmful stress for the members of a culture (McGoodwin 2001, 9).

² Among them, only commercial and professional fishermen have an income from fishing activity. I refer to recreational fishermen to those who fish for pleasure, commercial fishermen those who were used to fish and now sell the fish at the fish market and professional fishermen to those who go fishing offshore with their vessels

2 THEORETICAL PERSPECTIVES

2.2 The Socionatural Entanglement for a Conceptualization of the Sea as a Lived Experience

Although Malinowski's ethnography *Argonauts of the Western Pacific* (1922) placed the practical and symbolic role of the sea at the center of study, not many sea-oriented anthropological studies have been conducted over the years. In addition, reflections in sociology on the boundaries of society have over-considered its terrestrial manifestations, leaving out the relationship between people and the maritime environment (Cocco 2017). Therefore, maritime anthropology was born as a subfield of anthropology at the end of the 1970s to rethink and re-conceptualize the sea as a place of analysis and lived experience (Roszko 2020). As suggested by Bennett (2017), for a long time anthropologists have been concerned with the relationship between humans and the environment from a physical point of view, trying to understand what kind of human being was related to a specific environment. In addition, the concept of 'ecological culture' theorized by Bennett, offers an analytical lens to investigate the causes and modalities of the mutual correlation between humans and nature. In agreement with Marshall Sahlins and other anthropologists, Bennett argues that the increase in communities and technologies inevitably leads to an asymmetrical conception of the relationship between society and nature, in which the latter is subjected to the actions of humans. In this respect, other scholars agree: "The expansion of the human population and industrial economic activity is implicated in several environmental problems, including climate change, biodiversity loss, and pollution" (Kopnina 2020, 2). The dichotomy between the environment and humans has been examined in anthropology. However, I situate my work in line with those scholars who reject this dualistic view, proposing a symbiotic approach between the two to illustrate the profound interrelation of fishermen and the sea. Inspired by the psychologist James Gibson (1979), Tim Ingold (2000) shows how Eurocentric thinking has constructed this division and advances the 'dwelling perspective' to explain the process of *enskillment* which relies on the intimate connection and perception that human beings have towards their surroundings. Indeed, the author argues that for a subject to construct its livelihood, the incorporation of specific environment-related skills has to happen, resulting in specific ecological knowledge. For example, my interlocutors' know-how about the sea, i.e., the location and migration of certain species and their eco-friendly habitat, together with the conservation methods used by fishermen, informed me about their embedding of the marine source and the resulting particular social and cultural identity. Therefore, a community may assimilate and improve a set of capacities and notions that pertain to its geographical and social *entourage*, thereby also defining a precise cultural heritage (McGoodwin 2001). My interlocutors, for example, developed the cultural practice of fishing over the years as a consequence of the co-existence of Taranto and the marine environment. The old generation of fishermen I talked to, referred to me that they were born *in* and *with* the sea because of their fathers and grandfather's fishing-related practice, acquiring skills and knowledge from a very young age. Moreover, the resulting cultural features that arise in the community are described in terms of a strong sense of place and belonging related to the environment they live in (McGoodwin 2001). One of the aspects that revealed to me the sense of belonging in the fishing community was that my informants knew each other only through nicknames: "We are all brothers and I know him", pointing me to one of his

co-workers, “only by his nickname. I can’t tell you what is his name, and this applies to all of us. This gives us a sense of being part of the fishing community” (Domenico, October 2022).

Below, I elaborate further on the entanglement between society and the environment through the social-ecological system model.

2.2.1 *The Social-Ecological System Model*

I refer to the socio-ecological model as a valuable unit to frame my analysis and illustrate the interactions between the fishing population and the marine surroundings. The concept of social-ecological system (SES) has received remarkable attention over the past decade, as an approach to environmental problems that integrate eco- and human systems. By taking on Gallopìn's works (2001, 2006), SES includes societal and ecological systems in mutual interaction and can be adopted both for small-scale and large-scale analysis. I plan to use this analytical unit while referring to the small-scale interrelationship between fishermen and the marine space. In particular, the conceptual meanings that vulnerability, resilience, and adaptive capacity take on within the SES model are valuable for navigating my ethnographic data, and presenting my analysis. Framing social resilience according to Adger's (2000) definition as “the ability of groups or communities to cope with external stresses and disturbances as a result of social, political and environmental change”, highlights the relationship between social and ecological resilience, especially for those communities that build their livelihood on ecological and environmental resources. Moreover, I intend to conceive adaptive capacity as the capacity of a system to adjust to survive. Even if not diving into the scholars’ attempts to clarify the inter-relationship between resilience, adaptive capacity, and vulnerability (Lei *et al.* 2014), I make use of these concepts to help me navigate fishermen’s responses to socioecological changes.

I follow Ingold’s suggestion, mentioned above, to account for the crucial role the sea plays in the identity and emotional process-making of my interlocutors. Also, ‘the dwelling perspective’ shows how people become intrinsically attached to a place and the resulting meanings the latter might take on since the “sense of place attachment depends on the strength of emotional meanings that groups of people and individuals associate with a place and a particular setting” (Khakzad and Griffith 2016, 97). Affective conditions toward the environment can, therefore, arise from individual and collective interaction with the surroundings. For instance, because recreational, commercial, and professional fishermen are involved with the sea in different ways, the emotional states that occur from the sea-related activity and risk perceptions, differ. In the following paragraph, I illustrate how scholars elaborated on emotions within anthropology and their role in risk perceptions and adaptive behavior analysis.

2.3 The Role of Emotions in Risk Perception and Adaptive Behaviors

The study of emotions has flourished in the last decade as an interdisciplinary field that includes theories from psychology, philosophy, neuroscience, and feminist studies (Lutz and White 1986). As far as the notion has been elaborated in anthropology, the study of emotions has taken many directions over the years because of its inherent complexity. The anthropological discourse on emotions has long been based on many classical theories that have led to several dichotomies. Leavitt's (1996) work aims to go beyond the mind/body, natural/cultural, and meaning/feeling distinctions that have been

used in several attempts to theorize emotions. One remarkable example in the anthropological field is the cultural and cognitive-oriented anthropologists who have stated that emotion is an “aspect of cultural meaning” (Lutz and White 1986, 408). By contrast, Leavitt develops the argument that emotions cannot be understood through categories, as they are used to explain experiences that cross both mind and body, meaning and feeling, breaking the divisions of theoretical thought. Hence, there is little room left to define what an emotion *is* but rather what “*we* ordinarily mean when we talk and think about emotions” (Leavitt 1996, 516). People, in other words, interpret their emotions; moreover, this interpretation, together with other psychosocial factors such as perception and values, shape their behaviors. As Andrews *et al.* (2021, 5) argue: “The social construction of emotions, then, involves the expression and interpretation of emotions through language, vocal patterns, and gestures based on perceptions, values, and experiences of affect”. It is frequently disputed how much affect and emotion differ from one another. Some contend that whereas affect represents the physiological aspect of emotions, the latter is often associated with cognitive appraisal, behavioral expression, and social context (Gorton 2007). I follow Barrett (2017), who, in her work *How Emotions Are Made: The Secret of Life Brain*, uses the terms affective and emotional responses interchangeably. Emotions are socially created expressions of affect that are connected to a person's perceptions and values through cognition (Andrews *et al.* 2021). Within more recent studies that have produced models of risk perception and behaviors that emphasize affect and emotion as key elements (Slovic and Peters 2006; Sjöberg 2007; Peters 2011), the *risk-as-feeling* hypothesis (Loewenstein *et al.* 2021), constitutes a valuable framework for my analysis, as it tends to differentiate anticipatory emotional reactions from cognitive evaluations related to risk. Risk-related emotional responses are influenced by potential outcomes, individual exposure, and conditioning from past and future events rather than objective evaluations. Moreover, most of the theories that have investigated the interrelationship between emotions and resilience have emphasized the correlation between the latter and positive emotions (Fredrickson's 1998, 2001, 2003). Individuals are considered to be more resilient when they have a higher level of positive emotions. Although I found anger and a lack of optimism to bring discouragement among my informants to some extent, I also observed the positive side of anger (Hess 2014) and lack of optimism, which could sometimes be signs of acting adaptively. Also, to better illustrate the emergence of the surroundings-related emotions of fishermen, I refer to the affective connection to nature. Following Kals and Muller (2012), I consider this category of feelings as part of the development of an environmental identity to illustrate how sea-related emotions and feelings of passion and pride associated with them resulted in the fundamental factors which helped my informants to cope with risk and changing circumstances.

2.4. Methods and Positionality

This ethnography was conducted in Taranto, unfortunately a little irregularly, between October 2022 and January 2023. During these months, I could build rapport with the fishing community, learning about their intrinsic reliance on the sea. My main interlocutors for the first stage of my research were primarily recreational and commercial fishermen in their 60s. In the second stage, I also had access to professional fishermen, two of whom were between 30 and 35 years old. The choice of my key informants was mainly determined by their knowledge of Italian, willingness to talk, and ability to establish rapport. Overall, as the fishing community in Taranto is predominately male, all my participants were men who have always lived in Taranto. With them, a total of thirteen

small talks, informal conversations, and interviews were conducted in Italian as I am not familiar with *pugliese*³.

Since too little time has passed for scientific evidence of the impacts of the wind farm on the fishing community, the room left for my interlocutors' emotive states to emerge was wide, giving rise to a heterogeneous array of emotions and perceptions that I was able to grasp thanks to qualitative research methods. Therefore, the attention to the emotional field and consequent narratives and behaviors has resulted in the main direction of my research. The emotions of my interviewees became valuable data that allowed me to reflect on the subjective experience of change. Additionally, letting the field speak for itself led me to go beyond the wind farm installation and embrace many unexpected findings. Flexibility and constant redefinition of my purposes and methods were the main elements of the ongoing process of doing research. In the field, I could experience the importance of emotions in conducting qualitative research, as well as the empathic relationship between researchers and participants to obtain a dense understanding of participants' experiences (Cain 2012). This "emotionally-sensed knowledge," (Hubbard *et al.* 2001, 121), enabled me also to gain insights about what was more significant to them, thickly informing my analysis. In this respect, driven by Sarah Pink's work (2009) on sensory ethnography, I could constantly draw attention to the whole range of silences, body gestures, and facial expressions of my participants. If, on the one hand, it took me a while to map out the city and get access to fishermen, on the other it has been a natural process. People in Taranto were incredibly open and friendly, a beneficial attitude in getting to know my interlocutors. Moreover, I didn't experience many of the gendered issues that I expected as a young woman approaching a male research population. Additionally, the limitation that I had assumed on the fishing community's interest to contribute to my work as a result of dealing with those who lived in a small city in Southern Italy, translated into the opposite. Surprisingly, my last month in the field confirmed the involvement in my research of most of the fishermen, who were driven by their desire to be seen and heard. Their emotions of anger and lack of optimism accounted for it, revealing to me the extent of risk exposure they are currently facing. Overall, I moved between different methods, and ethnographic data collection has been a continuous combination of field research, content analysis, and writing in all the phases of the research, including the pre and post-field as "in ethnography, the analysis of data is not a distinct stage of the research" (Hammersley and Atkinson 2019, 167). Furthermore, all the names in this work are pseudonyms to secure my interlocutor's anonymity.

3. ETHNOGRAPHIC ANALYSIS

In the following section, I unpack the interrelationship of fishermen's emotions and risk perceptions. After presenting the context of my study area in Taranto, I intend to showcase how these affective states and impressions influence them by empowering or limiting their adaptive strategies in the present, conceptualizing these adaptive plans as forms of resilience. Using the wind farm as a point of departure for analysis in the first section, I analyze the heterogeneous spectrum of my interlocutors' affective conditions. In the second part, I illustrate how these emotions and risk perceptions can lead to action

³ *Dialect of Apulia region*

or limit it and how environment-related identity and the resulting feelings of passion and pride are successful constituents of resilience.

3.1 Context and Study Area

The research took place in Taranto, a city of 188 209 inhabitants along the Ionian coast of Apulia, one of the southern Italian regions. The uniqueness of this place lies in being located between the *Mar Piccolo* and *Mar Grande*⁴. Historically, this strategic position enriched local and regional life in terms of both economy and production (De Marco, 2020; Degl’Innocenti *et al.* 2021; Farella *et al.* n.d.). In Taranto, the fishing community is found in the ancient part of the city where the harbor is situated. Here, all the professional fishermen’s vessels are docked and a few meters further on, the stalls of commercial fishermen are located. Indeed, the fish market takes place daily and on Sundays, fishermen from other nearby cities such as Tamburi and Castellaneta come to Taranto to sell their fish. By continuing along the coastal zone, the area of the Ilva steel plant is encountered which stands just ahead of the wind farm identified in the figure by ten red marks indicating the respective turbines of which it is made up [Figure 1]. Before moving on, I briefly elaborate on Italy within the international fishing scenario.

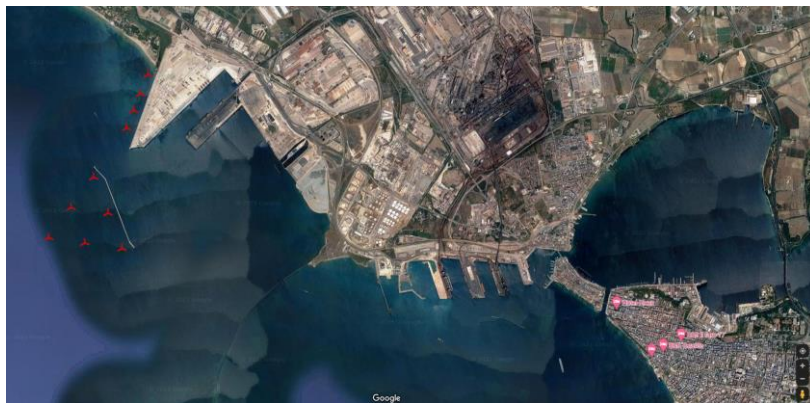


Figure 1. Aerial photo of Taranto and the surrounding area. Retrieved from Legambiente FB page

3.1.1 Italy’s Role and Its Challenges within the International Fishing Scenario

As already mentioned in the introduction, besides being a relevant example of small-scale fishing, Italy has one of the largest artisanal fishing sectors in the European Union, and its contribution to the local and international markets is paramount. Notwithstanding, as a consequence of the Common Fisheries Policy (CFP), the fishing sector in many coastal areas in Italy is undergoing drastic changes, including a remarkable reduction of the fleet, implemented by the European Union to reach sustainability goals (Nicolosi *et al.* 2021). According to a representative member of the fishermen’s cooperative in Taranto, the suffering of the fishing category is mainly caused by the fact that European regulations seem to consider Mediterranean fishing as that of Northern Europe. In this regard, he claims that while mainly large ships fish in the Northern Seas, fishing in the Mediterranean is primarily a family enterprise with an artisanal fleet made up of small vessels.

⁴ *Little Sea and Big sea*

Concerning the context of Taranto, the cooperative member advocates:

“Imagine how difficult our work as committees is when we go to tell a small fisherman that the law forbids him to drop more than 5,000 meters of the net into the sea because otherwise, he creates a problem for the resource, or when we go to tell mussel farmers that they cannot produce mussels up to their commercial size but have to move them on 28 February each year. What do they answer us?” (Conference, December 2022).

The lack of attention to small-scale fishing by European Union policies is therefore one of the main causes that make the sector vulnerable. Additional factors such as the spatial and resource conflict with large-scale fishing, the increasing presence of alien species and the disappearance of traditional ones, unregulated fishing, fuel costs, and other ‘uses’ of the sea, such as drills, pipelines, and wind farms (Raicevich et al., 2020), are also jeopardizing their practices. Regarding wind farms, the Report of M.A.R.E. Soc. Coop. a.r.l. (2021) conducted in the Emilia Romagna region, namely the National Association for Rural and Coastal Development, showed that anthropic projects such as wind farms are not neutral factors in the marine environment. Due to navigation-related risks in the area, the decrease of fishing zones and the effect on vessel mobility for safety reasons are identified as negative consequences from a social perspective. From an environmental point of view, drilling the seabed may provoke an alteration of the marine flora and fauna. Indeed, although certain species can respond to the perceived threat by migrating, others are more vulnerable, such as *ostriche* and *capasante*⁵. Nevertheless, the artificial reef created by the bases of the turbine pillars might represent a shelter for them or even a habitat for other species. The ten wind turbines installed in the Gulf of Taranto generated different outcomes among the three categories of the fishing community. By exploring fishermen's emotions and perceptions, I will develop further the perceived effects of the megaproject in the next section. Before, a paragraph that embraces the ancient traditions and economy of Taranto is illustrated.

3.1.2 People, Economy, Environment

Several studies have shown that small-scale fishing and mussel farming are considered the main ‘gifts’ of the sea from which Taranto has benefited since ancient times (De Marco, 2020; Degl’Innocenti et al., 2021; Farella et al., n.d.). During my visit to the Museum of the Sea situated in the ancient city, I improved my understanding of the ancestral traditions of Taranto, including salt production which aided the rise of other industries such as wool processing and purple dye manufacture obtained from a red powder produced by specific mollusks. Since it was used to dye the clothes of wealthy people, the red powder, obtained from the mollusk *Murex Brandaris*, has been a symbol of social and economic importance and for this reason, it was one of the most valuable goods in the Gulf of Taranto. Furthermore, the so-called *Bisso* constituted the set of ‘products’ of the sea that contributed to the development of the textile industry. In reality, the *Bisso* was just a part of the biggest and shiniest mollusks in the Mediterranean, i.e., *Pinna Nobilis* which is now dying out. Indeed, the estuarine ecosystem of *Mar Piccolo* enabled the technical development of mussel farming thanks to the presence of 34 *citri*⁶,

⁵ *Oysters and scallops*

⁶ *Underground springs that regulate water salinity and temperature*

which made the *cozza tarantina*⁷ one of the best in the world. Mussel farming and fishing are still considered to be the main characteristic activities of Taranto, although they are both suffering from cultural and economic variations that are challenging their survival.

Although Taranto is still known as “the city of the two seas”, it has changed; “Taranto, a city *of* the sea, has become a city *on* the sea; the sea has turned into a landscape contour, whose horizon is observed, admired, but not lived” (Leone 2021, 270). In line with this statement, one of my interlocutors confirms: “Since 1960 we are no longer a city that lives by the sea but a city on the sea because we have hosted Europe's largest steel plant, namely Ilva” (Ignazio, December 2022). Therefore, industrial development seems to be the main cause that has greatly shaped the social structure and identity of the population, turning Taranto into one of the places with the highest pollution index nationwide (Banini and Palagiano 2014). The Ilva steel plant construction was the most prominent moment that marked a disconnection with the sea for fishermen, as it hired them as workers due to a lack of manpower. A decade later, the *Mar Piccolo* began to be populated again, albeit in 2010 surveys of shellfish, revealed excessively high levels of toxic substances, compromising the local economy (Taranto ed il mare 4+, version 1.0.0.) The fishing population has therefore repeatedly suffered setbacks in fishing practices, and today, the chance to pass on the knowledge of the sea from generation to generation is even more problematic. This is partly due to a lack of interest by the younger generation: “No, fishing doesn't interest me... I don't see much I could do with this job, but with marketing, I can see it...” (Pasquale, 16 years old - January 2023). At the same time, fishermen themselves desire a different future for their children: “I am giving my children an education, I don't want them to do this work, it's heavy... they don't even know what I do... I want them to have a better future” (Gennaro, January 2023).

In the next paragraph, to demonstrate fishermen's tie with the environment and the resulting diverse emotional responses to risk perceptions, I elaborate on the function of the sea as a space itself that can elicit emotive affects.

4.2 The Wind Farm and Other Factors as Indicators of Affective Conditions and Risk Perceptions

4.2.1 *The Sea as an Emotionally Charged Space*

“[...] Save and protect us who struggle to make a living on these vessels, ensure that storms and waves do not take us away from the ones we love, strengthen the spirits of all people at sea, bless us who work and risk in all weather and on all seas”
(Ancient Apulian Fishermen's Prayer)

“The sea is salty”
(Fishermen's Saying)

The sea is not a neutral space for fishermen as the quotes above show. Among Apulian fishermen, the sea is traditionally associated with both gratitude and fright. It is either a space that makes livelihood possible or a space that conceals uncertainty. The latter was acknowledged by the fishermen by bringing an amphora, a traditional pot, on

⁷ *Mussel of Taranto*

the boat to keep the water fresh. This act of ‘getting prepared’ for the unknown future, required affective awareness and courage. In fact, “bad weather is as much an emotional experience as it is a physical one. The weather and corresponding bad seas cause much discomfort, fear, and risk” (Nightingale 2013, 2368).

I built this section on fishermen’s emotions as a result of their attachment to the sea, as emotions can arise from the socio-natural interactions with humans and non-humans. This chapter seeks to depict a portrait of fishermen’s emotions concerning the marine surroundings through fishing activity. In particular, this paragraph aims to introduce the formation of a specific ‘fishermen identity’ to account for the key role it plays in defining professional and commercial fishermen’s resilience which I will elaborate on in the second part of the ethnographic analysis. Moreover, I intend to emphasize that sea-related emotions depend on the extent of involvement and reliance fishermen have on the waters.

Pleasure, enjoyment, and feeling relaxed or relieved were mainly found among recreational fishermen. Their way to ‘feel the sea’ was therefore positive-oriented, representing a personal experience that takes place mostly according to their desire: “I have another job. I usually go fishing when it is sunny and I am free from other daily commitments. I usually choose where to fish depending on winds or wishes... my only aim is to relieve tensions and have fun” (Domenico, October 2022).

For recreational fishermen, the weather doesn’t seem to affect their fishing activity greatly, even if to some extent it is something to pay attention to. Indeed, they can freely opt for when, where and with whom they go fishing. Cosimo, in particular, enjoyed the ‘moonlight’ fishing, and sailing before dawn. “With sunlight, it is more difficult to find fish because they tend to hide”, he said. On the other hand, commercial and professional fishermen’s emotions were more complex due to their different implications with the sea. In this case, the identity is so shaped by the resource they thrive on that the line between themselves, fishing, and the sea is blurred (Nightingale 2013). Here, I propose to draw attention to the crucial meaning spaces have within their emotional sphere. Together with the resource, they also interact with the harbor, boats, fish storage, the pier, and other surroundings. One commercial fisherman told me a few weeks ago they were moved from the pier because a lot of renovation works to host the Mediterranean Games 2026 are being done by the municipality:

“We are no longer 3 meters from the sea but 200 meters, we are more comfortable here but it is not for our clients... there is no parking. We are also a bit more discontented though... down at the pier it was much more characteristic...and here now there is much more wind that sometimes we can not work. Today, for example, there was a 40/50 km/h *tramontana*⁸... but where we are now it comes from the front, whereas at the pier it came from behind and it was manageable for our stalls” (Gennaro, March 2023).

The profound entanglement that the nature-society studies have shown about the co-production of societies and environments (Cronon 1996; Hinchliffe 2007; Nightingale 2006, 2011b; Whatmore 2002), implies that some changes are emotionally charged and perceived in a specific way. How Gennaro feels and evaluates the new space can be an example. In this case, the relationship is not only between fishermen’s emotions and the environment but also between the weather and the fishing activity. How the wind affected him selling the fish, accounts for it. I remember the frequency they discussed the weather with me, expressing how happy they were on sunny days and how sad and demotivated

⁸ *Strong and dry wind coming from the North*

on cloudy and windy days, both in terms of their personal and professional lives. Fear was instead a collective emotion among professional fishermen who acknowledged their potential concern of going fishing throughout the summer due to unforeseen storms. Even if they now check the weather on an online website to anticipate upcoming fishing, they must nonetheless be ready for a sudden variation of winds and waves. One of my interlocutors told me that they had undergone multiple gales, which put their lives at risk. The weather was a factor that affected and influenced my research too; during heavy rain or windy days, I wasn't able to find my research population at the harbor. In those circumstances, my hope for a sunny day was usually strongly felt.

At this time, reflecting on the emotive responses that arise from the attachment to the sea by my interlocutors, allows one to grasp the role of 'affective forecasting' (Loewenstein and Lerner, 2003) in environmental risk perceptions (Böhm and Pfister 2008). This forecasting as a form of affective state is elaborated further in the next chapter, taking the wind turbines as a point of departure for examination.

4.2.2 Heterogeneity of Emotional, Perceptual, and Future-oriented Narratives

By considering the wind farm as an insightful point to then zoom out and embrace additional factors, such as the effect of European Union policies, increasing controls, and less interest in the local product, this chapter aims to illustrate how fishermen rely on the economics and knowledge related to the sea and the marine environment. This leads to a different array of affective conditions and risk perceptions among recreational, professional, and commercial fishermen. In this chapter, I focus specifically on the affective conditions and emotions of disinterest, anger, and optimism/lack of optimism that arose within the different categories of fishermen. Therefore, the perceived socio-economic implications that the wind farm has, or might have, on the diverse types of the fishing community accounts for the key role that the dependence on the sea plays in determining fishermen's emotions and impressions.

Disinterest

"I don't go fishing there so I don't care"
(Recreational Fisherman, October 2022)

As soon as I arrived in Taranto, on the bus to go home, I met a girl in her 20s who told me, "Well, the wind farm has a negative effect, because it reduces fishing activities". I was excited because the idea that it was a well-known innovation reflected what I had expected. After a few days, people I got in touch with, began to ask me with a certain irony "What are you doing here from Torino, or even worse, from Utrecht?". The more I explained, the more their face became confused and curious at the same time. Surprisingly, I had the feeling locals didn't know about the wind farm, or if they knew, they didn't have a strong opinion about it. I started wondering whether there had been enough information about it, or if there was a lack of interest by local people. And fishermen? I was inquisitive about the very first impressions I would have had.

My first interview was conducted with a recreational fisherman who was the doorman of the building where I lived, a 60-years old man. Except when he was interrupted because someone came into the janitor's quarters, the pace at which he told me about his seagoing experience was relentless and fluid. Nevertheless, when I came to ask him about the project, his posture remained static, and the room was filled with a few

seconds of silence. After a while, he told me he explicitly wasn't interested in it, and, with low involvement, he mentioned it was mainly constructed for political and economic reasons. Instead, he fervently remembered the Ilva steel plant, recognizing that it was environmentally but not economically harmful for Taranto. He often repeated to me that thanks to Ilva, people started to earn money, giving a lot of people food and job opportunities. All of a sudden he named the wind farm, with a certain degree of mistrust, thinking about Ilva pollution-related damages:

“One day someone wakes up and says the wind farm is no good anymore because it pollutes, and comes up with something else....that's how things go and we can not do anything, who gets up earlier in the morning, gets dressed... it is our saying” (Cosimo, October 2022).

Although he didn't show interest in the wind farm at first, the latter became a lens to reflect on the future for a while, giving rise to an emotive reaction. Cosimo was currently experiencing the anticipatory affective state of mistrust while imagining how things might turn out. To some extent, he already foresaw that the wind farm might be considered harmful over the years, just as has happened with the Ilva construction. Here, I suggest that disinterest is an anticipatory emotion as an affective response to the prospected future. His current disinterest was a result of his prospect that the project won't have any impact on his fishing activity. In the next months, I found the equivalent indifference while talking with two other middle-aged recreational fishermen I interviewed. In particular, *Ciro* didn't have any idea about the installation. To him, the area of the wind farm wouldn't disturb his fishing because he is used to fishing more in the *Mar Piccolo*, where the atmosphere is quiet, and he can enjoy the landscape. Also, *Giuseppe* stated that he doesn't care because he usually fishes closer to the surroundings but even if he pushed further in that direction, he would not mind. His fishing method of line or rod wouldn't suffer the turbines. Because they may choose where to go fishing and their finances are unrelated to the activity, the disinterest in the project was more clearly seen among recreational fishermen. As a result, a low-intensity perceived risk was found among this category of fishing, as the impacts that the wind farm construction could have had on their recreational activity were not identified by them. Overall, recreational fishermen didn't express any further concerns about the ongoing changes in the sea.

Anger

“If individuals appraise new stimuli as being negative and experience it intensely, they might attribute, recognize, and express this affective experience with emotional terms such as anger or fear” (Andrews et al. 2021, 5).

“There, there was a natural marine reserve and it was destroyed!” said *Cataldo*, a 35-years old fisherman, sitting on his blue and white boat anchored at the harbor. The sky was cloudy and threatened with rain. Nevertheless, the fishermen didn't seem worried to me. Saturday was their day off and they would have spent their day on the land. The natural marine reserve that *Cataldo* mentioned came up in other interviews among professional fishermen as well where fishermen explained that the wind farm was constructed in a zone of the sea rich in *poseidonia*. They explained to me that this specific

seaweed is an aquatic plant of the Mediterranean with considerable ecological relevance as it “produces the sea”. There, the fish can find more nourishment, grow up, reproduce, and find shelter until a certain size when they start migrating toward other destinations. When I first asked them about the installation, they wouldn’t even let me finish the question as they started complaining loudly. Their voices continuously overlapped one another and conveyed disappointment and rage. Although the conversation was getting increasingly chaotic, I let them speak. I was intrigued by that ardor that was filling the previously peaceful atmosphere of a Saturday morning. Their angered emotive reactions were mutually stimulated and I had the impression they were widely shared and perceived with a similar intensity. In this part, I focus on anger as an emotive response currently experienced by professional fishermen generated from local eco-knowledge that belongs to them. As a result, there was a high level of perceived environmental risk and concern over the potential effects on their fishing activity. The anger they were feeling came from the evidence that the *poseidonia* was no longer there: “We used to get also seaweed when we went to work there but now all you get is mud and you even risk losing your net. The wind turbines probably were good for some reasons, but not for the sea....” (Nicola, January 2023). Also, his son informed me he was used to diving there and knee-deep in seaweed, but the seabed have now all turned into clay due to the drilling and digging to fix the pillars. Other fishermen agreed, noting that while they may be able to locate that particular type of seaweed in other parts of the sea, they cannot find it anywhere else with the same level of quality and abundance. In this regard, there was also anger directed at environmentalists who claimed that the area of the sea in question was polluted due to its proximity to the Ilva steel plant. If on the one hand, fishermen seemed to seek support by expressing resentment that the environmentalists’ research did not reveal the presence of *poseidonia*, on the other, they distance themselves from their professionality by asserting that “the environmentalists do their job, and we fishermen do ours”.

Although fishermen acknowledged that the wind farm harmed the marine reserve, they made no mention of any evident changes to their catches. Nevertheless, their concern was expressed in terms of unknown consequences for the fish community, especially for valuable fish. As “each fish needs its own seabed”, quality fish can grow only among seaweeds. This uncertainty made them worried about their future catches. In this case, I propose to consider the emotional state of being worried as an anticipatory emotion in case of an undesired event (Roseman 1996). Therefore, the incertitude embedded in thinking about what might happen to their activity caused the emotion of being concerned. By conceptualizing the future as inextricably related to the present and the past, it is possible to grasp how certain feelings from previous experiences can be heightened in the present while thinking about the future. For example, an ex-professional fisherman showed rage when I asked if they, as the fishing community, had been taken into account during the construction of the project. His response was emotionally laden:

“We are the ones exposed and no one has ever said anything... whatever they constructed, such as the Ilva, they construct, such as the wind farm, or will construct in the future on the sea, they never consider those who live on the sea who can give precise advice... we have 50 years of experience, they might ask us 'what happens to the sea if we put this there'? Then we would answer the seabed, the fish, the production, the sea, the *poseidonia*...” (Lorenzo, January 2023).

Another fisherman emphasized the necessity to talk with those who depend on the sea for their livelihood. According to him, the project company likely asked the fishing cooperatives but the latter are not particularly representative because their presidents don’t fall into the fishing category. In this paragraph, I intend to emphasize the importance

of ‘being a fisherman’ to gain an understanding of the intense emotive responses and the consequent perceptions of change-related risks. In the case of professional fishermen, the sea identity is also associated with a set of knowledge they developed. The profound attachment to the sea and the resulting local ecological knowledge are crucial factors in determining their emotions and impressions. Drawing attention to the fishermen’s local environmental understanding is a remarkable aspect to take into account when analyzing how they experience the ongoing socio-ecological changes and how such changes are interpreted and understood as risks (Frawley *et al.* 2019). In this perspective, fishermen's ecological know-how is an additional and crucial aspect to improve understanding of the contribution people with strong ties to a resource have in the decision-making process when it comes to the construction of a nearshore wind farm. Among this fishing category, the wind farm was widely perceived and assessed as a threat to the ecosystem, causing worries for the future of upcoming catches. Along with ecological concerns, another argument that caused their anger toward the wind farm was due to economic reasons. From an economic perspective, they claimed that their activity was ineffective due to its size, whereas the turbine economy was larger and therefore more convenient. Rage arose also among two other professional fishermen concerning European policies on small-scale fishing. In the following, I discuss this aspect.

Zooming out: Anger Toward EU Fishery Policies

“They are against us because we are an inconvenient category!”
(Professional Fisherman, January 2023)

The affective condition of rage was also provoked by policies applied by the European Union to small-scale fisheries for sustainable fishing. In this section, I intend to shed light on the reactions of various professional fishermen toward the EU regulations, such as the reduction of fishing efforts to preserve the resource in line with sustainable targets.

Most of the fishermen I interviewed who go fishing in professional terms, use trawling fishing. This method of fishing, however, is being questioned as a sustainable way of fishing, either at the European or local level. This technique is recognizable because boats have a mechanism at the stern where the nets get rolled and unrolled offshore. Nets have tight meshes and are usually green and beige. They are often thrown into the sea and left there overnight so that, when fishermen arrive the next day, all they have to do is pull it up and immediately select the catches without waiting for fish to get trapped. The reasons why trawling is considered unsustainable are primarily related to the harm it causes to the resource. A commercial fisherman agreed: “I say that it is harmful. They scrape the seabed but they do a lot of damage because they also take things that are not needed” (Gennaro, November 2022). Also, his brother who worked with him added: “They should use larger meshes to let the smaller fish escape” (Domenico, November 2022). When I got access to professional fishermen the next month, they shed light on their arguments in defense of their fishing method; the main benefit of trawling was attributed to its capacity to tip the seabed. They found that it took at least three days for them to be able to make significant catches when they started fishing again after the ban on fishing in September. According to them, renewing the seabed allows microorganisms and other species not to die and fish to nurture and reproduce as a consequence. Regarding the reduction of fishing efforts, two fishermen from Calabria and

Sicily acted as spokesmen for the shared anger of the fishing category in these regions during an online Conference published on Facebook on June 11th, 2021 titled “Mediterranean in the industrial fishing network”. Since to preserve fish stocks in 2007, the CFP (Common Fishery Policy) forbade Italian small-scale fisheries to fish salmon and swordfish, they asked: “What can we fish now?”. The salmon related-ban was also a sensitive topic among my interlocutors, together with the tuna ban. They advised me angrily that only Morocco was allowed to fish tuna. The idea that this fish is crossing through Italy in April but they won't be able to catch it, constituted the main cause of their wrath. The prospect of losing the possibility resulted therefore in a rise of a dense emotional response. Since the underlying assumption behind these policies seems to consider the fishing population as the main actor who overexploits the resource, trawling fishermen reclaimed their efforts and active role in contributing to the sustainable use of the sea by promoting their active participation in the clean-up of plastic pollution in the ocean. Nevertheless, they often repeated to me that all these laws are being applied to them because they are an inconvenient category that is an obstacle to large-scale fishing. Furthermore, the lack of recognition of the uniqueness of the Mediterranean Sea by European Union policies was acknowledged and claimed by the fishermen, who responded with rage to the need to use larger meshes. According to them, the latter cannot be compared to the North Sea which hosts bigger fish. For this reason, they argued that it is more convenient for northern vessels to adopt larger meshes. Instead, in the Mediterranean Sea, they stated, the fish population doesn't reach such a big size. From this perspective, they claimed that “everybody has its own sea and Italy has to go with Italy and not with Europe's large vessels”. In this concern, anger was heightened: “The industrial vessels can trawl, and we can't... those vessels are allowed because they produce and give a percentage to the government, but they freeze the fish... the fresh fish is produced by the smaller vessels” (Cataldo, January 2023).

Anger towards European policies was revealed mainly by “letting the field speak”. Indeed, after 30 minutes the conversation that morning shifted indistinctly from the wind farm to this topic. Although the destruction of the marine reserve was a source of resentment, the professional fishermen's suffering from the European precautionary principle made them more vulnerable and angry. Furthermore, the rising cost of fuel and the lack of motivation toward the profession among the younger generation surfaced more discreetly during the interviews. These two factors were also observed among commercial fishermen. I will develop this further in the second part of this section. Below, I conclude this chapter by elaborating on the commercial fishermen's emotional outcome of optimism about the wind farm and the lack of optimism regarding ongoing changes.

Optimism

“I see it as a good and valid innovation!”
(Commercial Fisherman, December 2022)

Gennaro, a 63-years old man, was setting up the stall early in the morning. Although *scirocco*⁹ was blowing slightly, the sun was already shining in the sky. To me, he looked happy while selecting the variety of seafood and fish he usually sells, i.e., mussels, oysters, sea lemons, cuttlefish, octopus, and redfish. “Today is gonna be a good day”, he said. Between one sale and another, all of a sudden, he vividly remembered a time when people still had more jobs in the fishing sector since there were no new

⁹ *Humid wind coming from South-Est*

technologies to replace human labor. For example, he recalled the contribution people gave to the offload of the fish before the use of the forklift. From his point of view, most new technologies cause harm because they deprive people of their work. Using the topic to my advantage, I asked about his opinion on the wind farm. To me, it appeared that he had some degree of familiarity with the project as he quickly identified its location within the poly-sectorial pier. According to him, the wind farm is part of those innovations that do not damage but bring benefits, instead. Two times, he repeated with enthusiasm that the turbines were a very valid novelty. The reason for the positive-oriented opinion was economic: "If more of them will be made, we wouldn't have such expensive electricity bills... because if you have a contract with them you spend much less". The optimism currently experienced about paying less was rooted in the anticipation of a desired event, i.e., the addition of more wind turbines. Another commercial fisherman who worked with Gennaro assessed the wind farm in terms of ecological effects. According to him, the project's impact on the resource was not significant. Since only the excavations for the installation of the cables were carried out during construction, the sea wasn't affected to any great extent. Gennaro's brother jumped into the conversation, commenting that the only factor that causes harm is chemical substances. In this respect, they all remembered that specific sea area before the Ilva installation. They painted an idyllic picture of their time spent with their fathers over there when many fish, seaweeds, and "beautiful things" were the main inhabitants. After the construction, the steady drains ruined the flora and fauna, and together with the overturning of the seabed by cranes that released many toxic minerals, the sea changed. Compared to the Ilva steel plant, the sea was altered slightly by the wind farm's digs and drills. Rather, the foundations of the turbines constituted instead a habitat for some species such as oysters, sea sponges, and hairy mussels to grow naturally. The creation of an artificial reef was a prominent factor that led to an optimistic emotional response. As they reminded me many times, each species needs its eco-friendly dwelling. For example, stones are crucial for seafood to exist. Along with the consequent affirmative opinion of the wind farm, optimism emerged about the possibility of future increasing harvests, which would have resulted in higher incomes for them as a consequence: "The wind farm is not a problem, on the other hand, it is good for the fishermen because where they constructed the foundations underneath the sea and a lot of seafood is growing... and we take the seafood and make money" (Domenico, December 2022).

The potential of building the wind farm offshore rather than close to shore was seen by them as an issue that would pose a hazard. In that instance, they would consider it to be more damaging because it would impact the boat routes used by professional fishermen. On the contrary, since the turbines were located in that area, their impressions were positive-oriented. First and foremost, their low-risk perception stemmed from their emotional outcome about favorable expectations for their future. Also, optimism arose with their interpretation of the past; recognizing Ilva as having detrimental effects on the sea, has affected their current emotions and perspectives on the project. Nevertheless, the positive emotive orientation toward the wind farm wasn't traceable among commercial fishermen regarding other topics. In this case, ongoing uncertainty and change perceptions shifted into a lack of optimism.

Lack of Optimism

While I was helping Domenico to clean some mussels from the various micro-organisms sticking externally on the bivalves, he informed me that there was just sand on the pier where the fish market now stands. They anchored their boats there when they used to be proper fishermen. They have not fished for 20-30 years now. For Domenico, fishing was a source of loneliness and boredom. Rather, by interacting with customers while selling the fish, time passes more quickly. Even though the fishing experience was primarily associated with feeling lonely and bored, he recognizes the sea still as an essential part of his life. Nowadays, he is happy with this choice as the sea is continually changing, becoming a more complicated place to “live”. Although he prefers to “live on land”, he is still susceptible to several controls. In this regard, his emotional reaction showed a lack of confident perspectives for the future: “The situation is complex, they make us lose the will to do this job... they are ruining Taranto”. With “them”, Domenico referred to port authorities and finance guards who are increasingly exercising their control over the fishing population, and licenses, traceability, and documents are required. In this respect, he told me he lately had to be on guard because multiple checks had been made in the past few days. Since having a fish shop implies getting documents and VAT numbers, which is also a requirement for selling seafood to restaurants, the caution toward finance guards resulted in a slight decrease in work. He was able to deliver some mussels to the restaurants but not as much as he regularly did. The necessity to distribute seafood to restaurants was mainly rooted in lower purchases by locals as prices climbed. Most of all, mussels’ costs had skyrocketed. How commercial fishermen are currently perceiving the implications of controls on their fishing activity, also originates from their experience and interpretation of the past. Looking back to a simpler, more peaceful, and free time when the only thing needed to be a fisherman was a hand-built boat, heightens perceptions of change and uncertainty in the present and lessens optimism for the future: “We have experienced a big change over the years, for example, seafood was the main course for us. Now the new generation doesn't consider them at all... if we go on like this, we end up losing everything...” (Vincenzo, November 2022). New generations are more attracted by the global market of food and local product is receiving less interest as a consequence. Perceiving the risk that their activity could no longer be passed on over time resulted in different affective responses, either individually or collectively. On the one hand, sadness was felt while imagining the loss of their cultural heritage, whereas relief was sensed in picturing their sons having a better life. Under such high levels of socioeconomic uncertainty, they were no longer able to desire the same future for their children they once desired for themselves.

Following Ursula Hess (2014), emotions can therefore arise from appraisals and perceived stimuli events. Regarding the wind farm, the perceptions and emotions related to the alteration in the environment were mainly rooted in the fishermen’s involvement with the sea, and its evaluation was based on whether the change was in line with, or interfered with their job targets. These aspects were also sources of emotions and concerns about the ongoing policies and controls. In the next section, I illustrate how the heterogeneous affective conditions and impressions discussed above, can shape different ways to cope with risky circumstances, as individuals evaluate their ability to cope with and adjust to change (Hess 2014). Furthermore, I intend to show that my interlocutor’s resilience mainly stemmed from their affective connection to nature. Hence, their environmental identity and related feelings of passion and pride were key sources to keep working in the fishing sector.

4.3 Drivers of Social Resilience

In the previous section, I set up to navigate the fishermen's emotions toward the wind farm, how the latter became a factor in triggering even more emotional and rational responses about ongoing socio-environmental changes, and how these emotions are either generated, intensified, or shaped by the change and risk perception-related level. In the following, I intend to unpack how these emotions, together with those related to imagining the future, can be important factors in determining adaptive capacities, showing that emotions toward the sea played a crucial role in them being resilient. In this part, I draw Adger's definition of social resilience as "the ability of groups or communities to cope with external stresses and disturbances as a result of social, political, and environmental change" (2000, 347). I, therefore, conceive adaptive capacity as the capacity of the fishermen to adjust to survive the changing circumstances in which they live.

Small-scale fishing communities are considered to have intrinsic resilience in terms of "adaptability and transformability" (Walker *et al.* 2004). According to Salmi (2015), small-scale fishermen are attempting to adapt their methods to multiple events, interests, and views, such as biodiversity conservation, recreational use, and tourism. In this chapter, on the one hand, I aim to elaborate on how my interlocutors' adaptive strategies were affected by their risk-related perceptions, emotions, and future imaginaries of their activity. On the other hand, I illustrate how fishermen's emotions toward the sea, resulting in feelings of passion and pride, can become a crucial factor of resilience. Indeed, I observed the reason why professional and commercial fishermen decided to keep their fishing activity despite all of the ongoing changes and to adapt accordingly, stemmed from their identification with the sea.

Specifically, emotions "functioned as psychosocial factors to inform strategizing relating to adapting behavior changes" (Andrews *et al.* 2021, 14). In particular, professional and commercial fishermen are overall experiencing intensified emotions derived from the current risk-related circumstances. As I showed in the section above, anger and lack of optimism are affective indicators of the extent they perceived themselves, and their heritage, as exposed to change and threat. Notwithstanding, I could identify some responses to change and risk among my informants. In particular, among the qualitative indicators of social resilience identified by Johnson *et al.* (2014) in their studies of the fishing community in the US, I make use of 'diversification' and 'social identity' as the main drivers of resilience to illustrate the outcomes of my interlocutors. Specifically, I found 'social identity', and the associated feelings of passion and pride, to be a transversal driver of resilience which crossed both commercial and professional categories. As a result, these factors helped fishermen to remain engaged in fishing activity.

Diversification of fishing activity

By following Bryant and Knight (2019), during moments of "Crisis" the future cannot be anticipated, lessening anxiety and uncertainty as a consequence. When a crisis threshold is crossed, the future is unknowable and uncertain, indeed. In some cases, uncertainty about the future played an important role in defining strategies to adapt among

my interlocutors. For some commercial fishermen, the future of their activity no longer had any further prospect, and they were craving better conditions for their children:

“One of the main reasons why I want my children to go to school and not take them here is because this is a finished craft. As long as we stay it goes on, but as soon as we stop, it's over! There will remain only educated [fishermen] who, if they look at the sky, don't even know what time it is ...” (Vincenzo, December 2022).

The lack of optimism toward the future, therefore, generated discouragement for their children to enter the fishery: “I also don't want my children to end up like me”. Nevertheless, feeling discouraged didn't lead fishermen to drastically limit or even zero out resilience strategy attempts. Instead, they told me they were getting used to and adapting to the increasing controls and ongoing changes. In particular, Gennaro desired to open his fish shop to clean and sell mussels for restaurants. His choice was mainly determined by the desire to do his job freely and light-heartedly, without being worried about the finance guard's controls. Opening his fish shop was, therefore, a strategy he strived for to lessen the concerns rooted in pursuing part of his job illegally. Notwithstanding, he seemed dispirited to some extent regarding the long time and high costs this would imply; while his head dropped a little toward the right shoulder, and his eyes looked down at the ground as a sign of discouragement, he said: “Let's see what I can do...”. After a few months, he reached out to tell me he started the procedures to open a wholesale store for open packages with one of his friends.

On the contrary, for some professional fishermen, the future of the activity was still imaginable but they considered themselves unable to adapt. The increasing fuel costs were becoming unsustainable:

“We did many strikes but we have solved nothing... if I, [a fisherman] for example, earn 1,000 euros a day, 400/500 [euros] go on fuel, 10 % to the large warehouse where I unload [the fish], the ice I bought, the workers I have to pay... I have nothing left!” (Lorenzo, January 2023).

Economic reasons gave rise to the emotive responses of concern, anxiety, and anger which brought the fishermen to create Whatsapp groups for mutual support and sharing. Indeed, my interlocutors got to know other fishermen coming from different areas of Apulia “by bringing problems together”. Therefore, the networking strategy was mainly determined by giving space to the ongoing issues-related emotions, resulting in a collective support network. Here, I suggest that social capital, which in this case refers to the ability to connect with other members of the near coastal villages, can be regarded as a source to cope with disturbances (Ledogar et Fleming 2008). Networking enabled fishermen to relieve their perceived risks and emotional states by being part of a community. From this perspective, some 30-years old professional fishermen are trying to create more groups using social media, to ‘keep up with the times’. In the same way, fishermen from Sardinia and Sicily are trying to cope with the decrease in purchases by locals, by selling their catches through Apps that connect them directly to restaurants. However, attempts of young fishermen in Taranto were often associated with an underlying feeling of fatigue: “We try, but at the end everywhere we look, we see that it goes wrong...”. Practical reasons intensified this demoralization, limiting adaptive strategies in terms of diversifying the fish preparation process. The need to find an alternative solution to offer the fish ready and packed was determined by dealing with the product offered by larger vessels and the increasing demand of locals to buy fish ready

for use. Professional fishermen referred that they are not able to provide a comparable product due to a lack of time and workers:

“We work from Monday to Friday 24 hours and when we have a little break, we want to take a nap. We don’t have the time to clean all the fish we catch. To clean 10kg of shrimp we need at least 3 hours more or an additional colleague” (Cataldo, December 2022).

The de-valorization of the fish produced locally was a matter of concern that was widespread. During a conference that I followed online, a fisherman from Sicily declared that at this pace, 40 percent of small-scale fishing will be replaced by large vessels within three years. Although professional fishermen acknowledged they couldn't supply the demand of the global market, complaining about larger vessels and younger generations losing interest in the fresh product, they reclaimed the role of small-scale fishing in doing so, showing pride in the role they cover within international fishing. In this instance, even though they were unable to change their activity to adjust to the world's food trend, their social identity represented a sign of resilience that helped them to deal with the perceived disregard for their work at a global level.

A further example of an adaptation strategy is the recreational service of Pescaturism. Defined as: “an activity carried on by a single owner, or a company or fishing cooperative, aimed to transport people other than a crew, such as tourists, and to conduct recreational activities” (Prosperi *et al.* 2019, 14), it can contribute to the resilience and long-term sustainability of coastal communities. Pescaturism represented, for the nephew of one of my interlocutors, a way to diversify his activity and get by. Using the fishing boat for tourist purposes was a successful way for him to keep his craft alive and earn money during the summer. He particularly enjoyed sharing his knowledge with tourists and being creative by entertaining them. In this case, Pescaturism was a way to deal with the economic crisis and at the same time preserve those feelings related to being a fisherman, and emotions toward the sea. Indeed, as well as being a way of increasing his income, diversifying the activity has also helped him not to abandon his artisanal fishery and social identity.

In the next section, I delve into social identity and the embedded feelings of passion and pride, as the main indicator of resilience.

Social Identity: Passion and Pride

According to Dyrset *et al.* (2021), social identity is strictly linked to the local knowledge fishermen passed on over several generations. Fishermen’s current identity is rooted in the knowledge, practices, and values they grew up with. As I observed, my interlocutors’ narratives intensively reflected the family history and tradition of fishing, highlighting the emphasis and the pride of being a fisherman from generation to generation. Nevertheless, in some cases, discontent arose among professional fishermen when their sons decided to follow in their father’s steps. I remember Cataldo sharing his displeasure with me while talking about his son's choice. Walking together on the pier with crossed arms on a cloudy day, he referred to me that the hard work and the lack of perspective of a future were the main reasons for him to feel demotivated in thinking about his son’s decision to enter the fishery. Some fishermen entered the fishery immediately, either by their own choice or their father’s. Instead, his son ended up being a fisherman only after school and other experiences that enhanced his decision to pursue the family tradition. To him, fishing was a passion passed down from his father who

taught him the craft. Passion was not only the ‘starting flame’ but it became a marker of self-motivation over the years to continue to go fishing under change and uncertain circumstances. I follow the insights of Bekker *et al.* (2019) to argue that only being skilled is not enough in times of risk and transitions. Passion is a complementary element necessary to remain and thrive in the fishing sector. For my two youngest interlocutors, the fishing-related emotions associated with external threats were therefore somewhat counterbalanced by the passion, heightened in times of crisis, for the activity itself. Here, I suggest considering passion as having a key role in determining fishermen’s resilience. Indeed, passion is a crucial part of fishermen's identity, and it allows them to survive the increasing exposure and vulnerability the fishing community is undergoing, remaining anchored to their roots in the sea. The fishing activity was conceived by them as “a job of passion without which you can’t go [fishing]. We live off the sea [...]. We need passion to do this job”. Swinging on the boat’s edge, they hinted at a smile. At that moment, passion became closely tied also with love. The relational well-being outcome (Andrews *et al.* 2021) of being a fisherman was mentioned as a further factor to reduce the heaviness of fishing. Being on the boat for 24 hours was also experienced as an opportunity to be together, by deepening and enjoying the relationship with colleagues who “become your family as we stay more offshore than on land”. Love was also experienced by another professional fisherman coming from a near village who was used to going fishing with his son. From his point of view, fishing was a means to create a connection, giving him the chance to be with his son for some hours during the day and share a common vocation. Furthermore, for one 40-years old professional fisherman, passion was the main element that prevented him from getting out of the fishing sector. To him, imagining a new job was hard, as well as the idea of re-inventing himself: “How could I change? I put passion into this job, and now it is difficult to get out. I made my investments, how can I start from scratch? And what else could I do?”. Although the perceived uncertainty of his job led him to think about alternatives outside the fishing sector, the decision of remaining within the activity had a double motivation: on the one hand, it was determined by the “fear of the unknown” (Andrews *et al.*, 2021) and on the other by the intense role passion played in recalling his efforts and fishing-related affective state. The former argument was underlined by the statement “What else could I do?” which revealed the anticipatory emotive response of fright while imagining other job possibilities and the resulting high sense of vagueness. Fear of change was also prompted by having an intense emotional connection with fishing, which translated into a strong passion. The latter was then recognized by him as a marker which made the decision to change professionally even more challenging. Furthermore, passion was closely related to pride especially among one of my interlocutors, resulting as a further component of social identity (Johnson *et al.* 2014). In line with McGoodwin (2001) who documented fishermen’s pride arguing that “among the members of small-scale fishing communities who fish at sea, there is usually a profound pride in their occupational identity [...]” (2001, 14), I set out to account for the prominent role of social identity and related passion and pride in shaping resilience pathways. I refer to Miñarro *et al.* (2022) to consider fishing as a “way of life” and contend that fishermen's refusal to abandon fishing is mostly explained by their pride in being fishermen, even in changing and unpredictable conditions. For example, while showing me how to unroll the fishing rod by turning a wooden construction counter-clockwise, a 60-years old professional fisherman shared with me proudly what his job consisted of, identifying himself as the “[fisherman] number one of Taranto”. After a few seconds, he started remembering his father and grandfather’s teachings and staring at me with his icy eyes, he ended up saying that fishing was “in his blood and veins”. Pride was therefore embedded in his individual and social identity, formed and shaped by fishing activity. To him, being a fisherman constituted a factor that helped him to face the

increasing economic costs. Despite the recognition of less income, he explicitly stated that he would have never abandoned the fishery because it was his primary identity. Hard times didn't lead him to look for alternatives. On the contrary, his social identity strengthened his willingness to keep fishing, showing resilience under change and risky circumstances.

The persistence of fishing among my interlocutors was mainly expressed in terms of diversification of the fishing activity, and social identity. Since I recognized that attempts to diversify the activity resulted from an attachment to the sea and the resulting fisherman identity, I consider the latter as the fundamental aspect of resilience in the context of my research. Also, passion and pride feelings embedded in their social identity played a key function in coping with external disturbances. Following Broch (2013), who studied local responses to change in social and natural environments, I showed individuals' positive and negative emotional reactions to ongoing changes as vital elements of coping with changing circumstances and risks. Although anger and lack of optimism partly limited their responses to disturbances resulting in feelings of discouragement, they didn't completely compromise to cope with change and uncertainty. Furthermore, emotions that stemmed from the involvement with the marine surroundings and the consequent passion and pride feelings resulted in transversal and successful sources of resilience.

5. CONCLUSION

Taking the installation of the wind farm in the Gulf of Taranto as an initial factor of my analysis, this study has unpacked fishermen's emotions as a result of the strong connection they have with the maritime environment in the city of Taranto, South Italy. This work intended to show the close correlation between environment, emotions, risk perceptions, and resilience. More precisely, I suggested that to better understand how emotions, change processes, risk exposure, and resilience are perceived, experienced, and developed, it is useful to analyze the function of the sea as an identity source that enabled fishermen to develop emotional involvement, distinctive sea-oriented competence, and specific self-motivation to cope with change and uncertainty.

With this study, I aim to contribute to the environment-society academic debate, providing evidence of the mutual entanglement of the two domains. In line with Andrews *et al.* (2021), I further proposed that the interplay of emotions, involvement with the sea and local ecological knowledge surfaced in my interlocutor's narratives have an impact on how risk is perceived and how adaptability is activated. In particular, when faced with uncertainty, specific affective states are heightened (Andrews *et al.* 2021), and processes of change and risk exposure are experienced and interpreted with various intensity layers. Therefore, this study also seeks to demonstrate how focusing on emotional aspects may enrich the knowledge of the socio-environmental discussion.

Although the sea was transversally identified and felt as a space emotionally charged among recreational, commercial, and professional fishermen, the lived experience of the waters was expressed a little differently by the fishing categories. Recreational fishermen, whose incomes are derived from a job outside fishing, experienced more positive-oriented emotions with fishing, and their perceptions about risk and change declined in terms of disinterest regarding the wind farm and other conditions. On the other hand, commercial fishermen's relationships with the sea have changed over the years since they opted for selling seafood and other local fish at the harbor rather than going fishing themselves. Despite this choice, the sea remains a remarkable aspect of their identity and their bodies bear witness to this everyday relationship with salty waters. In this case, optimism and lack of optimism stemmed from evaluations of different facts. The wind farm was assessed as a valid innovation for its location in the poly-sectorial pier area and for ecological and economic reasons, resulting in low-risk perceptions about the installation. However, the latter paved the way for reflecting and experiencing broader concerns among commercial fishermen over additional factors. Fewer purchases by clients, and increasing controls, licensees, and documents required gave rise to sentiments of discouragement for the ever-changing times, intensifying the perceived risk of losing the fishing tradition in the future. Although they felt sad while thinking of themselves as the last generation of "real" fishermen, relief was sensed in them for their children to have a better future. Similarities with professional fishermen were found in these terms. On the contrary, the wind farm construction and European policies grasped them with high intensity, and fishermen gave voice to their opinions angrily. Anger was therefore generated by the magnitude they considered and experienced the installation as a threat to the *poseidonia* seaweed and European policies for the small-scale vessels. Furthermore, experiencing the present as a risky situation, led them to a long-term worry about the future. Nevertheless, the 'diversification' and 'social identity' drivers (Johnson *et al.* 2012) were identified as important factors in determining fishermen's resilience. In particular, social identity held a crucial role in these terms and surfaced in most of the

conversations and interviews I conducted, represented by the fishermen's expression "The sea is our identity" or "We are made by the sea".

By giving space to my informants' emotional trajectories, I could surprisingly discover a wider spectrum of challenging elements that went beyond the wind farm construction. Using emotions as a qualitative lens to shed light on fishermen's experiences of perceived risk, this work aspired to provide evidence of the vulnerability that small-scale fishing communities are undergoing in the Taranto context when prospects for their traditional activity to survive the socio-environmental changing circumstances are limited. Furthermore, I intended to show how the fishing community's scenarios of an "increasingly complex future", or even no longer imagined, were shaped by the ongoing changes' perceptions and their memories of "more peaceful and easier times" of the past. Their narratives reflected the quality of life of sea-faring men, including mussel farmers, as more "pure" and "free", despite the Ilva installation of the 60s. Adopting a diachronic temporal perspective (Bryant and Knight 2019) enabled me in understanding my interlocutor's interpretation and experience of the present in light of the past, shaping their ways of thinking about the future at the same time.

With this thesis, I intend to call for the urge to fill knowledge gaps and contribute to possibly empowering small-fishing communities both at the local and international level as their seagoing tradition is at risk of being lost when confronted with the ever-changing panorama. Parallely, since the most promising locations for renewable wind energy are similar to those for successful fishing, the implementations of these projects have a high probability to affect fishing communities' resilience (Broch 2013), my research advocates for the need for carrying out sociocultural assessments in project planning and construction. This means assuming a collaborative and participative approach between the actors involved in the project development and the local stakeholders, especially those who "know the sea because they were born in it" (Gennaro, January 2023).

Although the strength of this study is identified in approaching a very recent innovation not yet analyzed from a sociocultural point of view, three main limitations that call for further examinations can be found. First and foremost, the shortened and fragmented time spent in the field allowed me to gather less ethnographic data than I had planned. As a result, the number of participants in this study constitutes a second limitation since it doesn't provide an accurate representation of Taranto's whole fishing community. Further research in this context can, therefore, give a more precise account of the topic analyzed. Additionally, because Taranto is a small town, research conducted in other areas may provide a more comprehensive picture of the condition of the fishing community throughout the South of Italy. Lastly, additional studies that broaden anthropological knowledge of the wind turbines of Taranto can improve an understanding concerning the sociocultural effects of the project on the fishing community in a few years. Similarly, these studies can offer evidence about the persistence of fishermen's emotions, perceptions, and resilience over long-time periods.

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BIBLIOGRAPHY

- Adger, W. Neil., 2000. "Social and Ecological Resilience: Are They Related?" *Progress in Human Geography*, 24(3): 347-364.
- Andrews, Evan J. *et al.* 2021. "Coastal Fishers Livelihood Behaviors and Their Psychosocial Implications for Fisheries Governance in a Changing World" *Front. Mar. Sci.* 8 (634484): 1-21.
- Banini, Tiziana, and Palagiano Cosimo. 2014. "Environment and Health in Italian Cities: The Case of Taranto" In *Environmental Deterioration and Human Health*, edited by A. Malik *et al.* Springer Science+Business Media Dordrecht
- Bekker Y.W., J. de Koning, and J. van Tatenhove. 2019. "Resilience and Social Capital: The Engagement of Fishing Communities in Marine Spatial Planning" *Marine Policy*: 132-139.
- Bennett, W. John., 2017. *The ecological transition: Cultural Anthropology and Human Adaptation*. London, NY: Routledge.
- Berrett, Lisa Feldman. 2017. *How Emotions are Made: The Secret Life of the Brain*. Mariner Books
- Böhm Gisela, and Pfister Hans-Rüdiger. 2008. "Anticipated and Experienced Emotions in Environmental Risk Perception" *Judgment and Decision Making* 3(1): 73-86.
- Böhm, Gisela. 2003. "Emotional Reactions to Environmental Risks: Consequentialist versus Ethical Evaluation" *Journal of Environmental Psychology* (23): 199-212.
- Braun, Bruce, and Castree Noel. 1998. *Remaking reality: Nature at the millennium*. London: Routledge.
- Brink, Tayla S. ten, and Dalton Tracey. 2018. "Perceptions of Commercial and Recreational Fishers on the Potential Ecological Impacts of the Block Island Wind Farm (US)" *Front. Mar. Sci.* 5(439)
- Broch, Harald Beyer. 2013. "Social Resilience – Local responses to changes in social and natural environments" *Maritime Studies* 12(3): 1-17.
- Brosch, Tobias. 2021. "Affect and Emotions as Drivers of Climate Change Perception and Action: a Review" *Current Opinion on Behavioral Sciences* (42): 15-2.
- Bryant, Rebecca, and Daniel M. Knight. 2019. *The Anthropology of the Future*. Cambridge: Cambridge University Press.
- Cain, Cindy L. 2012. "Emotions and the research interview: What hospice workers can teach us" *Health Sociology Review* 21(4): 396–405.
- Casola, Enrico and Scordatella Giuseppe. n.d. "I Pescatori di Puglia e la Piccola Pesca Artigianale". A.G.C.I. AGR.IT.AL.

- Cindy, S. Bergeman, Blaxton Jessica, and Joiner Raquael. 2021 “Dynamic Systems, Contextual Influences, and Multiple Timescales: Emotion Regulation as a Resilience Resource” *The Gerontologist* 61 (3): 304–311. <https://doi.org/10.1093/geront/gnaa046>
- Cocco, Emilio. 2017. "Confini Mobili. Identità e Culture Nel Mediterraneo Nell’ottica Di Una Sociologia Con Il Mare” *Ricerca migrante. Racconti di donne dal Mediterraneo*, edited by Canta C.C, 65-83. Roma: Edizioni Roma TrE-Press
- Cronon, William. 1996. “The trouble with wilderness; or, getting back to the wrong nature” *Uncommon ground: Rethinking the human place in nature*, edited by W. Cronon, 69–90. New York: W.W. Norton.
- De Marco, Vittorio. 2020. “L’Economia nei Mari di Taranto nell’Età Moderna” [The Economy in the Seas of Taranto during the Modern Era] *Economia IX* (2): 215-225.
- Degl’Innocenti, Eva, Leone Danilo, and Turchiano Maria. 2021. *Storia delle acque di Taranto*. Puglia: Edipuglia.
- Dyrset, G. Margaryan, and L. Stensland. 2022. “Local knowledge, social identity and conflicts around traditional marine salmon fisheries. A case from Mid-Norway” *Fisheries Management and Ecology* (29): 131– 142.
- FAO. 2018. *The State of Mediterranean and the Black Sea Fisheries*7. General Fisheries Commission for the Mediterranean. Rome, Licence: CC BY-NC-SA 3.0 IGO.
- Farella, Giulio, *et al.* n.d. *Il Tempo del Mare: Catalogo dell'Esposizione Permanente della Miticoltura a Taranto*, Published following the exhibition “Il Tempo del Mare”. <https://doi.org/10.3390/su13031211>
- Frawley, Timothy H. Crowder Larry B., and Broad Kenneth. 2019. “Heterogeneous Perceptions of Social-Ecological Change Among Small-Scale Fishermen in the Central Gulf of California: Implications for Adaptive Response” *Front. Mar. Sci.* 6(78).<https://doi.org/10.3389/fmars.2019.00078>
- Fredrickson, Barbara L, and Levenson Robert W. 1998. “Positive emotions speed recovery from the cardiovascular sequelae of negative emotions” In *Cognition and Emotion* (12):191–220.
- Fredrickson, Barbara L, *et al.* 2003. “What good are positive emotions in crises? A prospective study of resilience and emotions following the terrorist attacks on the United States on September 11th, 2001” *Journal of Personality and Social Psychology* 84(2), 365-376.
- Fredrickson, Barbara L. 2001. “The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions” In *American Psychologist: Special Issue* (56):218–226.

- Gallopín, Gilberto C. 2006. "Linkages between vulnerability, resilience, and adaptive capacity" *Glob. Environ. Change* (16): 293–303. doi: 10.1016/j.gloenvcha.2006.02.004
- Gallopín, Gilberto C. *et al.* 2001. "Science for the 21st century: from social contract to the scientific core" *International Social Science Journal* 168: 219–229.
- Gloria, Christian T., and Steinhardt Mary A. 2014. "Relationship among Positive Emotions, Coping, Resilience and Mental Health" *Stress and Health* 32 (2): 145–156.
- Gorton, Kristyn. 2007. "Theorizing Emotions and Affect: Feminist Engagements" *Feminist Theory* 8(3): 333–348.
- Grati, Fabio, and Perretta Francesca. 2022. *Opportunità di Diversificazione del Reddito e Accesso ai Finanziamenti EU per la Piccola Pesca in Unione Europea*. Bruxelles: I Verdi/Ale.
- Hammersley, Martyn, and Atkinson Paul. 2019. "The Process of Analysis" *Ethnography: Principles and Practices*. New York, NY: Routledge.
- Hess, Ursula. 2014. "Anger is a positive emotion" *The positive side of negative emotions*, edited by W. G. Parrott: 55–75. The Guilford Press.
- Hinchliffe, Steve. 2007. *Geographies of Nature: Societies, Environments, Ecologies*. London: Sage.
- Hubbard, Gill, Backett-Milburn Kathryn, and Kemmer Debbie. 2001. "Working with emotion: Issues for the researcher in fieldwork and teamwork" *International Journal of Social Research Methodology* 4(2): 119–137.
Human Ecology Review (20): 97–115.
<https://doi.org/10.22459/HER.20.02.2014.05>.
- Idda, Lorenzo, *et al.* 2009. "Capacity and Economic Efficiency in Small-Scale Fisheries: Evidence from the Mediterranean Sea" *Marine Policy* 33 (5), 860–67.
<https://doi.org/10.1016/j.marpol.2009.03.006>.
- Ingold, Tim. 2021. *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill*. Routledge.
- Johnson, Teresa, Anna Henry, and Cameron Thomson. 2014. "Qualitative Indicators of Social Resilience in Small-Scale Fishing Communities: An Emphasis on Perceptions and Practice" *Human Ecology Review* 20 (2):97-115.
- Kals, Elisabeth, and Muller Markus M. 2012. "Emotions and Environment" *In Environmental and Conservation Psychology*, edited by Clayton S. D: Oxford University Press.
- Khakzad, Sorna, and Griffith David. 2016. "The role of fishing material culture in communities' sense of place as an added-value in management of coastal areas" *Journal of Marine and Island Cultures* (5)2: 95-117.

- Kopnina, Helen. 2020. "Human/Environment Dichotomy". In *The International Encyclopedia of Anthropology*, 2-9.
- Leavitt, John. 1996. "Meanings and Feelings in the Anthropology of Emotions" *American Ethnologist* 23(3): 514-539.
- Ledogar, Robert, and Feming John. 2008. "Social Capital and Resilience: A Review of Concepts and Selected Literature Relevant to Aboriginal Youth Resilience Research" *Pimatisiwin* 6(2): 25-46.
- Lei, Yongdeng *et al.* 2014. "Rethinking the relationships of vulnerability, resilience, and adaptation from a disaster risk perspective" *Nat Hazards* (70):609–627.
- Loewenstein, George and Lerner Jennifer S. 2003. "The role of affect in decision making" *Handbook of affective science*, edited by R. Davidson, K. Scherer & H. Goldsmith, 619-642: New York: Oxford University Press.
- Loewenstein, George, Weber U. Elke and Hsee K. Christopher. 2001. "Risk As Feelings" *Psychological Bulletin* 127 (2):267–286.
- Luz, Catherine, and White Geoffrey M. 1986. "The Anthropology of Emotions" *Ann. Rev. Anthropol* (15): 405-36.
- M.A.R.E. Soc. Coop. a.r.l. 2021. "Indagine sull'incidenza sul settore pesca della realizzazione degli impianti a mare per le energie rinnovabili": 1-60.
- Marshall, Nadine A., and Marshall Paul A. 2007. "Conceptualizing and operationalizing social resilience within commercial fisheries in northern Australia" *Ecology and Society* 12(1): 1
- McGoodwin, J. R., and FAO. 2001. *Understanding the Cultures of Fishing Communities: A Key to Fisheries Management and Food Security*. Food & Agriculture Org.
- Miñarro, Sara *et al.* 2022. "Does catching more fish increase the subjective well-being of fishers? Insights from Bangladesh" *Ambio* 51, 1673–1686. <https://doi.org/10.1007/s13280-021-01698-5>
- Nicolosi, Agata *et al.* 2021. "Small -Scale Coastal Fisheries in the Midst of Adaptation and Diversification: Insights from Southern Italy" *Sustainability* 13: 1-27. <https://www.mdpi.com/journal/sustainability>
- Nightingale A J, 2011b, "Beyond design principles: subjectivity, emotion and the (ir-) rational commons" *Society and Natural Resources* (24) 119–132.
- Nightingale, Andrea 2013. "Fishing for nature: the politics of subjectivity and emotion in Scottish inshore fisheries management" *Environment and Planning A* (45):2362-2378

- Nightingale, Andrea. 2006. "The nature of gender: Work, gender and environment" *Environ. Plan. D Society Space* 24(2):165–185.
- Ounanian, Kristen. 2016. "In Place of Fishing: Coastal Communities in Transition." *University of Rhode Island*. https://digitalcommons.uri.edu/oa_diss.
- Parrott, Gerrod. 2017. "Role of Emotions in Risk Perception" In *Consumer Perception of Product Risks and Benefits*, edited by Emilien, G., Weitkunat, R., Lüdicke, F. Cham: Springer.
- Peters, Ellen. 2011. "Affect and Emotion" In *Communicating Risks and Benefits; An Evidence-Based Users's Guide*, edited by Brewer N.T., and Downs J. S: FDA.
- Pink, Sarah. 2009. *Doing Sensory Ethnography*. SAGE Publications Ltd.
- Prosperi, Paolo. *et al.* 2019. "Adaptation strategies of small-scale fisheries within changing market and regulatory conditions in the EU" *Marine Policy* (100): 316-323.
- Raicevich, Saša. *et al.* 2020. "The Unexploited Potential of Small-Scale Fisheries in Italy: Analysis and Perspectives on the Status and Resilience of a Neglected Fishery Sector". In *Small-Scale Fisheries in Europe: Status, Resilience and Governance* (23), edited by Pascual-Fernández, J., Pita, C., Bavinck, M. MARE Publication Series: Springer, Cham
- Regulation (EU) 2021/1139 of the European Parliament and of the Council of 7 July 2021 establishing the European Maritime, Fisheries and Aquaculture Fund and amending Regulation (EU) 2017/1004. Retrieved from <http://data.europa.eu/eli/reg/2021/1139/oj>
- Roseman, Ira J. 1996. "Appraisal Determinants of Emotions: Constructing a More Accurate and Comprehensive Theory" *Cognition and Emotion* (10): 241–277.
- Roszko, Edyta. 2020. "Maritime Anthropology". In *The SAGE Handbook of Cultural* edited by Pedersen L., and Cliggett L., 316-333. London: SAGE Publications Ltd.
- Salmi Pekka. 2015. "Constraints and opportunities for fishing" *Sociol Ruralis* (55): 258-274. <https://doi.org/10.1111/soru.12095>.
- Sjöberg, Lennart. 2007. "Emotions and Risk Perception" *Risk Manag* (9): 223–237.
- Slovic, Paul and Peters Ellen. 2006. "Risk Perception and Affect" *Association for Psychological Science* 15(6): 322-325.
- Smith, Craig A. and Ellsworth Phoebe C. 1985. "Patterns of cognitive appraisal in emotion" *Journal of Personality and Social Psychology*, (48): 813–838.
- "Taranto ed il mare 4+", Version 1.0.0 (Updated July 5, 2021). <https://play.google.com/store/apps/details?id=com.ai2.mappataranto&hl=en>

Whatmore, Sarah. 2002. *Hybrid geographies*. London: Sage.

Wilson, Timothy D. *et al.* 2003a. "How happy was I, anyway?" A retrospective impact bias" *Social Cognition* (21): 421-446
<https://doi.org/10.1521/soco.21.6.421.28688>

POPULAR SUMMARY

With the worsening of the ecological crisis related to climate change in recent years, various fields of study, including anthropology, have increasingly been addressing environmental-related problems and seek for innovative solutions. In particular, the sector of renewable energies has increased exponentially and the construction of offshore wind farms is getting more and more attention in this scenario. Since April 2022, Taranto has been hosting the first ten wind turbines nearshore of the Mediterranean Sea, named Beleolico. As Taranto has thrived on the sea since ancient times, the latter has always had a crucial role in identity formation, especially for the fishing community. This study was driven by an interest to learn more about how fishermen perceive Beleolico to identify any potential sociocultural implications of the construction on the fishing-based community. How do fishermen's knowledge of the sea and sense of identity and belonging that derives from the marine environment shape their emotions and perceptions about the project? For three months, I lived in Taranto, conducted interviews, and witnessed the intimate interdependence between fishermen and the sea. Drawing on nature-society studies that have shown the mutual implication of the two spheres, I argued that how emotions, change processes, and risk exposure are experienced and perceived, stemmed from the function the sea holds, and how it constituted and shaped the 'fishermen's identity' over the years. The wind turbines turned out to be only one of the elements that brought out affective conditions among fishermen during the broader ongoing environmental and socio-economic changes that are challenging the ancient tradition of fishing. This means that commercial and professional fishermen are undergoing vulnerability and risk exposure. Nevertheless, although discouragement partly emerged as a shared affective state, this work aimed at shedding light on fishermen's adaptive strategies. I showed how feelings of pride and passion result from the connection with the sea and provide a measure of how a resilient attitude can be developed by commercial and professional fishermen.