

FISHING TOURISM IN TUSCANY: CURRENT SITUATION AND FUTURE DEVELOPMENTS

Andrea Massaro, Marina Sartini, Francesco De Carlo, Ilaria Rossetti

Abstract: Professional fishery plays a crucial role in the development of the Tuscan economy. Currently, this sector involves more than 1500 people and 583 boats, producing around 11 000 tonnes/year of seafood products. Fishery in Tuscany is a multifaceted sector with solid cultural baseline that over the years has changed its own relationship with the sea. In the last decade, fishers and consumers have become aware of dangers that threaten the marine environment and in particular fish stocks. For this reason, fishers and their associations, assisted by fishery biologists, have decreased fishing effort and invested in other activities to integrate their income. Fishing tourism, for example, is a diversification of fishing activities and represents a sustainable activity for artisanal fishers, combining environmental protection, maritime culture, an alternative profitability and a connection between fisheries and tourism. There are currently 47 active fishing tourism licenses distributed along the entire Tuscany coast (including islands), mainly concentrated in ports of Livorno and Viareggio. These are mainly small-medium sized boats operating with passive gears followed by trawlers. From interviews carried out with fishers, fishing tourism is considered an important activity to reduce fishing effort without compromising income and to create new opportunities and networks.

Keywords: Fishing tourism, Small-scale fisheries, Tuscany

Andrea Massaro, APLYSIA, Italy, andrea.massaro@aplysia.it, 0000-0001-9224-3883
Marina Sartini, APLYSIA, Italy, marina.sartin@aplysia.it, 0000-0003-1545-2109
Francesco De Carlo, APLYSIA, Italy, francesco.decarlo@aplysia.it, 0000-0003-3421-5395
Ilaria Rossetti, APLYSIA, Italy, ilaria.rossetti@aplysia.it, 0000-0003-3260-8769

Referee List (DOI 10.36253/fup_referee_list)

FUP Best Practice in Scholarly Publishing (DOI 10.36253/fup_best_practice)

Andrea Massaro, Marina Sartini, Francesco De Carlo, Ilaria Rossetti, *Fishing tourism in Tuscany: current situation and future developments*, pp. 440-447, © 2024 Author(s), CC BY-NC-SA 4.0, DOI: 10.36253/979-12-215-0556-6.40

In recent decades the professional fishery deals with some criticalities, the main of which is represented by the overexploitation of fish resources [4][5][17][19]. In addition, progressive degradation of marine ecosystems due to climate change, pollution and maritime activities in terms of maritime traffic have been observed [2][10]. Furthermore, pressures of tourism in coastal areas could negatively affect fishing activity, in particular artisanal fishery, removing the possibility for fishers to work in some areas during summer season [13]. This situation has repercussions on the fishers's economy.

Professional fishery plays a fundamental role in the development of the Tuscan economy. Currently this sector involves more than 1500 people and 583 boats, producing around 11 000 tonnes of fish products per year [1][24][5]. In this region, commercial fishery is a multifaceted sector with solid cultural roots and over the years has changed its relationship with the sea. In the last decade, fishers and consumers have become aware of dangers that threaten the marine environment and in particular fish stock [8][12][18][23].

In this context, requirement for fishers to protect fish resources by reducing catches and suggesting valid alternatives to supplement their income has become increasingly pressing [20]. Fishing tourism and ittio-tourism are activities capable of satisfying these aspects, combining environmental protection, fisheries culture and alternative profitability [3][6][11][21].

Since 1992, fishing tourism, is defined as an activity carried on by a single owner, or a company or fishers cooperative, aimed to transport people other than crew, such as tourists, for recreational activities (D.M. n. 293/99; D.M. 96/2006). Generally, a typical day of fishing tourism involves a trip where tourists can actively participate in fishing activities by learning fishing techniques; furthermore, they can eat freshly caught fish, as well as swimming and visit beaches that can only be reached by boat. Not all fishing vessels can conduct this activity. Vessels with licences for passive fishing gears (gillnets, trammel nets, longlines) are allowed while trawling can bring tourists fishing only with a rod.

Ittio-tourism is still a limited activity where tourists spend a day in the house of a fisher, renting a room and having traditional and local fish meals with his family [22]. This activity can only be practiced by professional fishers with a regular license.

This paper aims to provide useful information about the situation of fishing tourism in Tuscany; in particular a case study in Viareggio provided useful information and advice about this activity.

Materials and Methods

From April to August 2023, a survey was carried out regarding the number of fishing tourism licenses in Tuscany. The data coming from the EU Fleet Register, from the Agriculture and Rural Development office of the Tuscany Region, from the fishing cooperatives were analysed and verified through inspections at the main Tuscan harbours or on the telephone. The Coast Guard Fishing Department were also involved in the survey. Furthermore, a web search was carried out using specific keywords and excluding those activities that practice recreational fishing. Characteristics of the vessels (LOA, GT, kW, gears) and information about fishing

tourism activity (time spent, maximum number of persons allowed on board, travel itineraries, rate, pros and cons) were recorded.

Results

From an administrative point of view, the Tuscan coast is divided into four maritime compartments (Marina di Carrara, Viareggio, Livorno and Portoferraio) where 26 fishing harbours can be identified. The Tuscan fishing fleet consists of 583 boats (CFR data, 08/2023) and is characterized by a high number of artisanal fishing vessels armed with passive gears (trammel net, gillnets and longlines). Trawling is widely represented throughout the region and contributes high levels of production both in terms of operators employed and catches (Fig.1).

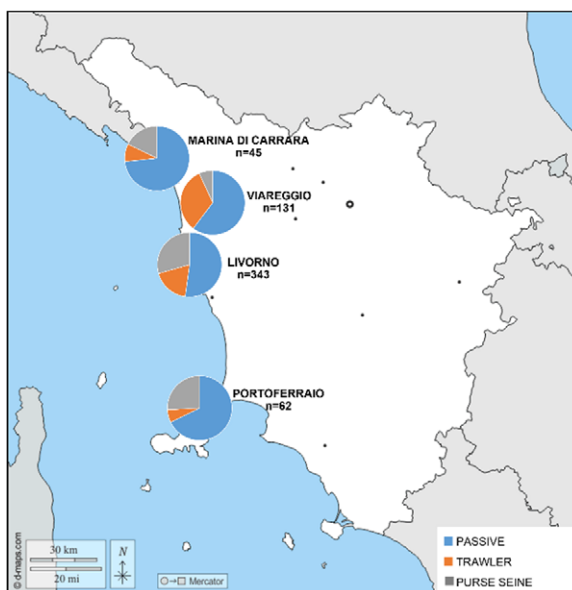


Figure 1 – Spatial distribution of the professional fishing fleet in the Tuscan maritime compartments.

At the time of the survey, 47 fishing tourism licenses were active in Tuscany. The authorized vessels are mainly distributed in the maritime compartment of Livorno (30 vessels) and Viareggio (8 vessels) (Tab. 1).

Regarding vessel registration harbour, the greatest number of licenses is found equally in the ports of Livorno and Viareggio (Tab. 2).

Vessels authorized for fishing tourism are mainly armed with passive gears (50.0 %) and purse seine (36.9 %). Vessels with a trawling license represent 13.1 % of the total (Tab. 3).

Table 1 – Number of fishing tourism licenses by maritime compartment.

Maritime Compartment	Number of Fishing Tourism Licenses
Livorno	30
Viareggio	8
Portoferraio	5
Marina di Carrara	4

Table 2 – Number of fishing tourism licenses by harbour.

Port	Number of Fishing Tourism Licenses
Capraia	3
Castiglioncello	5
Castiglione della Pescaia	1
Cecina	1
Follonica	2
Livorno	8
Marciana Marina	1
Marina di Carrara	4
Marina di Grosseto	1
Piombino	2
Porto Azzurro	2
Porto Ercole	2
Porto Santo Stefano	3
Portoferraio	2
Vada	2
Viareggio	8

Table 3 – Characterization of the fishing gear of vessels with a fishing tourism license.

Port	Passive	Trawler	Purse Seine
Capraia	3	-	-
Castiglioncello	2	-	3
Castiglione della Pescaia	1	-	-
Cecina	-	-	1
Follonica	2	-	-
Livorno	3	2	3
Marciana Marina	-	-	1
Marina di Carrara	3	1	-
Marina di Grosseto	1	-	-
Piombino	1	-	1
Porto Azzurro	1	-	1
Porto Ercole	1	-	1
Porto Santo Stefano	1	-	2
Portoferraio	-	-	2
Vada	1	-	1
Viareggio	4	3	1

Vessels with a fishing tourism license are small-medium sized vessels with limited engine power (Tab. 4). Analysing the data relating to vessels with a purse seine licence, we note that they have a second license for passive gears. Since these vessels have a length lower than 15.5 m LOA (Length Over All), it is plausible that the main gear is represented by passive gears.

Table 4 – Technical characteristics of vessels with a fishing tourism license.

Gear	LOA min (m)	LOA max (m)	Average Tonnage (GT)	Average Engine Power (kW)
Passive	6.5	14.1	5.8	78.2
Trawler	8.2	12	6.7	70.3
Purse Seine	7.1	15.3	6.1	72.4

Regarding ittio-tourism, in total 6 activities were found: 3 activities were found on the continental coast, 1 in Viareggio and 2 in the province of Grosseto and 3 on the islands of the Tuscan Archipelago, 2 on Elba Island and 1 on Capraia Island.

Viareggio case study

In Viareggio harbour, a total of 8 vessels were authorized for fishing tourism: 4 vessels belong to small scale fisheries, 3 trawlers and 1 purse seine. The latter has double fishery license (purse seine and gillnet): from a direct check, it has been confirmed that the vessel carries out its fishing activities mainly with gillnet. Table 5 shows the characteristics of vessels authorized to fishing tourism.

Table 5 – Technical characteristics of vessels in Viareggio with fishing tourism license (Gear: P=Passive; T=Trawler; PS=Purse Seine).

ID	Main Gear	Secondary Gear	LOA (m)	Tonnage (GT)	Engine Power (kW)	Hull
1	P	P	9.0	8.2	109.5	Fiberglass
2	T	P	11.1	9.8	58.8	Wood
3	T	PS	11.9	9.9	95.5	Fiberglass
4	T	P	11.6	3.4	84.5	Wood
5	P	P	11.1	9.8	132.4	Fiberglass
6	PS	P	11.6	9.7	148.0	Fiberglass
7	P	P	9.6	5.6	130.0	Fiberglass
8	P	P	14.1	9.3	216.0	Fiberglass

The results obtained from the interviews, highlighted that vessels authorized to fishing tourism are small-medium size vessels and carry out coastal fishing with gillnets/trammel nets or trawling with a 6 nautical miles license. Some vessels carry out longline fishing for white fish and swordfish.

Generally, 3 fishers carry out fishing tourism activities assiduously, 2 sporadically (less than 10 trips in a year) and 3 did not carry out trips in the last years. The maximum numbers of tourists allowed on board are 12 with an average of 10. There are no particular itineraries, but each fisher, according to weather conditions, decides where to carry out the activities. The duration of the activities varies from half a day to a maximum of 8 hours, and it does not include night experiences. The activity takes place mainly in the spring-summer months (from the end of May to the end of September) and price varies approximately between 60 to 100 euros per person depending on the duration of the activity.

Regarding ittio-tourism activities, in Viareggio a fishers's cooperative has opened in the local fish market a bar/restaurant promoting local fish, with particular attention on poor species (i.e. stingrays, mullets). The activity involves 8 workers and very often the fishers serve clients.

Discussion

In Tuscany, fishing tourism is well represented in many harbours, and it gives to fishers the opportunity to approach the world of tourist hospitality, representing an alternative source of income. In Italy, the activity is relatively new and in recent years the licenses issued have been increased [21]

The vessels have adapted to standards required by law, for example by adding bathroom and kitchen, or "ad hoc" vessels have been built so they can be able to continue the fishing activity, but at the same time to host tourists [21][22].

Fishing tourism belongs to the categories of "sustainable tourism" and "experiential tourism", helping to economically support local fishers' communities and, at the same time, sharing with tourists the cultural heritage of the world of fishing and his local traditions. [6][9][14][15][16] Furthermore, during the fishing tourism day, catches are limited to lunch needs. Therefore, fishers who carry out these income integrating activities are aware of the advantages for the environment in terms of reduced exploitation of resources.[6][8] In addition, crew takes advantage from these activities in terms of less physical and psychological strain.

Some critical issues emerged during the interviews. Trawlers that carry out fishing tourism are prevented by law from fishing with trawl net and the activity is limited to taking tourists fishing with rods. By applying the safety regulations also to the guests on board, the possibility of being able to use the trawl net, for example for just one haul a day, compared to the usual hauls of a normal fishing day, would be an added value for these boats and would allow the tourist to learn about a type of fishing often mistakenly considered "illegal" and harmful.

Furthermore, it clearly emerged that without a land-based structure capable of managing the organizational and logistical part, both fishing tourism and ittio-tourism are difficult to achieve. Generally, the organization (contacts with customers, advertising, logistics) is in charge of the fisher's families. There are few situations where there is no direct involvement of family members, but management is entrusted to the cooperative or external structures.

An aspect to be further developed should be communication between the world of fishing and the tourism sector [7][21]. This is fundamental to make these types

of activities known to an ever-increasing number of users, who, as already mentioned, are interested in experiences different from normal tourist itineraries. In this context, it would be advisable for fishers to acquire technical, technological and marketing knowledge so they can be able to personally promote their fishing and fishing tourism activities and manage the bureaucratic aspects more easily. In this context, for example, the FishmedNet project (<https://www.fishmednet.com/>) was developed in order to create a Mediterranean-wide database on fishing tourism and ittio-tourism.

Conclusions

The results of this work show that fishing tourism and ittio-tourism have a great future, linking professional fishery and tourism. The benefits of the eco-tourism affect both environment and fishers' economy.

Fishing tourism proves to be a sustainable form of tourism, suitable for everyone, capable of raising awareness of a not well known and very often misunderstood sector. In addition, culinary tips and knowledge sharing by fishers about values of seafood constitute a plus for this experience.

On the part of the fishers, it is clear how the awareness of carrying out sustainable fishing is rooted, especially in the new generations, to preserve the environment by guaranteeing sustainable management of the resource. These represent the strong foundations of this activity. On the other side, bureaucratic support and a sponsorship network, should be created or strengthened, to allow the development of these activities.

Acknowledgements

Many great thanks for the help and collaboration to the people and associations involved in this research: Regione Toscana, Legacoop Toscana, Legacoop Agroalimentare, Cittadella della Pesca OP, Cooperativa Marenostrium, MP Evolution, MP MAS 500, MP Sofà and Portus staff.

References

- [1] ARPAT (2008) - *La pesca professionale, l'acquacoltura e lo stato delle risorse ittiche nel mare toscano*. Relazione LR 66-Piano 2006: 135 pp.
- [2] Barange M., Bahri, T., Beveridge M. C., Cochrane K. L., Funge-Smith S., Poulain F. (2018) - *Impacts of climate change on fisheries and aquaculture*. United Nations' Food and Agriculture Organization. 12 (4): 628-635.
- [3] Briano R., (2017) - *Report on the Role of Fisheries-Related Tourism in the Diversification of Fisheries*. European Parliament Fisheries Committee, p. 26 (2016/2035 (INI)).
- [4] Christensen V., Coll M., Piroddi C., Steenbeek J., Buszowski J., Pauly D. (2014) - *A century of fish biomass decline in the ocean*. Mar. Ecol. Prog. Ser., 512, 155-166.
- [5] FAO (2022) - *The State of Mediterranean and Black Sea Fisheries 2022*. General Fisheries Commission for the Mediterranean. Rome.

- [6] FARNET (2013) - *Fisheries and Tourism: Creating Benefits for the Community*; European Commission, Directorate-General for Maritime Affairs and Fisheries, Director-General (FARNET): Brussels, Belgium.
- [7] Galeotti, R. (2019) - *La Liguria e la "scoperta" dell'agriturismo del mare*. Secolo XIX, p. 1 June 17th 2019.
- [8] Gomei M., Bellia R. (2019) - *WWF Principles for Sustainable Fishing Tourism*. WWF Mediterranean Marine Initiative, Rome, Italy: 20 pp.
- [9] González R. C. L., Piñeiro Antelo M. d. l. Á. (2020) - *Fishing Tourism as an Opportunity for Sustainable Rural Development—The Case of Galicia, Spain*. Land 9, no. 11: 437.
- [10] Hernández M. M. G., Leon C. J., Garcia C., Lam-Gonzalez Y. E. (2023) - *Assessing the climate-related risk of marine biodiversity degradation for coastal and marine tourism*. Ocean Coast. Manag., 232, 106436.
- [11] Horta e Costa B., Claudet J., Franco G., Erzini K., Caro A., Gonçalves E.J. (2016) - *A regulation-based classification system for Marine Protected Areas (MPAs)*. Marine Policy 72:192–198.
- [12] Jacquet J., Pauly D. (2008) - *Funding priorities: big barriers to small-scale fisheries*. Conservation biology, 22 (4): 832–835.
- [13] Lai M. B., Cicia G., Del Giudice T. (2016) - *Pescaturism, a sustainable tourist experience*. J. Clean. Prod., 133: 1034–1042.
- [14] Meneghello S., Mingotto E. (2016) - *Promoting sustainable development through fisheries-related tourism experiences. Benefits from the integration between fisheries and tourism in Venetian coastal areas*. Int. J. Sustain. Dev. 11 (3): 447–457.
- [15] Morgan R., Lesueur M., Henichart L.M. (2014) - *Fisheries diversification: A case study of French and English fishers in the Channel*. In Social Issues in Sustainable Fisheries Management; Urquhart, J., Acott, T.G., Symes, D., Zhao, M., Eds.; MARE Publication Series: New York, NY, USA, 2014: 165–182.
- [16] Nicolosi A., Sapone N., Cortese L., Marcianò C. (2016) - *Fisheries-related Tourism in Southern Tyrrhenian Coastline*. Proceedings. Soc. Behav. Sci. 2016, 223, 416–421.
- [17] Pauly D., Alder J., Bennett E., Christensen V., Tyedmers P., Watson R. (2003) - *The future for fisheries*. Science, 302 (5649): 1359–1361.
- [18] Piasecki W., Głabiński Z., Francour P., Koper P., Saba G., Molina García A., Ūnal V., Karachle P.K., Lepetit A., Tservenis R., Kızılkaya Z., Stergiou K.I. (2016) - *Pescaturism - A European review and perspective*. Acta Ichthyol. Piscat., 46 (4): 325–350.
- [19] Prosperi P., Kirwan J., Maye D., Bartolini F., Vergamini F., Brunori G. (2019) - *Adaptation strategies of small-scale fisheries within changing market and regulatory conditions in the EU*. Mar. Pol. 100: 316–323.
- [20] PSL-GAC Toscana (2015) - *Piano di Sviluppo Locale del Gruppo di Azione Costiera "Costa di Toscana"*. Regione Toscana, Florence.
- [21] Romanelli M, Meliàdò E. (2021) - *Fishing tourism in Italy*. Ocean Coast. Manag., 215.
- [22] Saba G., Favero R., Canale E., Meliàdò E., Molinari A., Vatteone D., Manaratti G., Ierardi S., Tiribocchi A. (2013) - *Pescaturism – A European Review and Perspective*. Acta Ichthyol. Piscat. 2013, 4: 325–350.
- [23] Salmi P. (2015) - *Constraints and Opportunities for Small-scale Fishing Livelihoods in a Post-productivist Coastal Setting*. Sociol. Rural. 55 (3): 258–274
- [24] Sartor P., Carbonara P., Cerasi S., Lembo G., Facchini M.T., Lucchetti A., Sabatella R. F., Musumeci C., Zupa W., Spedicato M.T. (2019) - *A selective and low impacting traditional fishery, sustaining the economy of small coastal villages in central Mediterranean: keep or replace the small-scale driftnets?* Fish. Manag. Ecol. 26: 661–673.