The connection between recreational fishing and the traditional fishing sector in the emerging area of marine tourism: challenges and opportunities for diversification with European Fisheries Funds

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Abstract

The desired diversification of fishing has one of its main lines of development in tourism, especially in countries as touristy as Spain. An important part of the European Fisheries Funds has subsidized, through the FLAG, local development projects in fishing zones with a large part of these projects related to tourism, including nautical tourism. In this new context it is possible to quantify and analyze the subsidized projects' typology and even rethink the ever complicated relations between recreational and professional fishing.

This work analyzes 705 projects financed by European funds, of which 172 are related to tourism and 48 to nautical tourism. The objective is to categorize and characterize the subsidized projects and, subsequently, to verify the degree of relationship, if any, between the projects of nautical tourism and professional fishing.

1- Introduction:

The relationship between recreational and professional fishing has not been exempt from conflict since both compete for the same resources (Voyer et al, 2017; Llompart et al, 2017). In addition, nautical tourism has displaced fishers in many Spanish ports, presenting a conflict between a booming industry and one in decline. At a European level, marine recreational fisheries have a significant economic impact, amounting to 10.5 billion euros, providing almost 100,000 jobs (Hyder et al, 2017), and in Spain alone there are more than 871,000 licenced recreational fishers (Gordoa et al, 2019). The largely unregulated and rapid growth of tourism-based recreational fisheries in developing countries has caused social and ecological issues (Bower et al., 2014; Sheaves et al., 2016; Morales-Nin et al, 2005), and similar patterns have been seen in some industrialised countries that attract considerable numbers of tourists (Lewin et al, 2006; Solstrand 2013; Holdsworth et al, 2018).

However, despite this conflictive relationship, in Spanish ports it is not unusual to find former fishermen who have become recreational boat skippers, expert guides for recreational fishing or in charge of maintenance. Nautical and recreational fishing has provided an alternative to professional fishing or extra income for fishermen, although usually on an informal basis.

Faced with the boom in recreational fishing, professional fishing is at a critical point, threatened by an economic, social and environmental crisis, which requires studying new forms of income for fishermen and their families. In this context, the EU is committed to fisheries diversification, but a diversification that does not imply abandoning a millenary culture and trade, but instead, takes advantage of traditional knowledge and skills of men and women of the sea. In Spain, it is clear that activities linked to tourism must play a key role in fisheries diversification. On the other hand, beach tourism is in a phase of maturity,

while immersed in a tourism paradigm shift, characterized by the emergence of new technologies that have modified the patterns of consumption and marketing in the sector. In this framework, a post-Fordist tourist model is appearing. The tourist is no longer satisfied with a standardized product but looks for alternative tourism options according to their individual tastes.

The marriage between tourism and fishing seems perfect and beneficial for both sectors, and indeed different activities have been studied and implemented under the label of marine tourism, fishing tourism, sailing tourism... In recent years, in Spain there has even been a regulatory change in favour of this type of activity, although undoubtedly, the greatest boost has come from EU, EFF and EMFF funds, which, under the umbrella of the necessary diversification of fisheries, have financed the implementation of activities in this line.

Thus, the synergies between tourism and fishing seem evident. However, the potential of the relationship between recreational fishing and professional fishing should not go unnoticed. Professional fishermen hold a traditional and professional knowledge of incalculable value for recreational fishing. The complementary nature between both activities become evident when actions and activities that combine the interests of both sectors are encouraged. It is interesting to study if European funds are being used for this purpose, whether activities that combine professional fishing with nautical or recreational fishing are being financed and if so, look at how the projects are being carried out.

Therefore, we propose the hypothesis that "European fisheries diversification funds represent an opportunity for the emergence of businesses and activities that connect professional fishing with recreational and nautical fishing". For this we will analyze the 705 projects subsidized with EFF funds, with the objective of finding what percentage of the diversification funds have gone to tourism and in particular to activities included in the heading TUP07: Services of nautical tourism, diving, tourist boats.

Nautical tourism and professional fishing are two activities that have ignored one another (when not at loggerheads) for decades, so it is expected that many of the activities in this category have nothing to do with professional fishing. We will analyze, one by one, the subsidized activities in this section. The objective is to validate the hypothesis by identifying businesses and activities that are being subsidized by EFF funds and that connect traditional fishing with recreational and nautical fishing.

With the hypothesis and the objectives of the work formulated, in the following section, the concepts of fishing diversification and fishing tourism will be analyzed and related to the EFF Funds as well as to the concept of Local Development. In a third section, the methodology is explained and in the fourth the analysis results are presented. Finally, there is a section of conclusions and discussion, since we believe that looking beyond the results, the work should serve as a platform to rethink the concept of fishery diversification and its relationship / confusion with the concept of local development.

2- Fisheries diversification and European funds

The Integrated Maritime Policy (IMP) of the European Union sets as a general objective the optimization and sustainability of the exploitation of the sea under a holistic approach to all EU policies related to the sea (EU, 2007). In this context, fishing activities should be integrated into an intersectoral approach of maritime management, set in an ecosystem-based approach to fisheries. This approach implies the need to develop the professional fishing activity in a manner compatible with the requirements of protection and conservation of the marine environment, which in turn will contribute to bringing the sector in line with the growing social demand for coastal protection.

The adaptation of the fishing sector to these new requirements and the need to improve the income derived from extractive activity, involve the design and execution of activities complementary to fishing that represent measures of socioeconomic diversification of the sector.

Aware of this need, the reform of the Common Fisheries Policy laid the foundations for the establishment of a new financial instrument, the European Fisheries Fund (EFF), and established, among its priorities, grants to support local strategies focused on the sustainable development of fishing areas. At the end of the EFF programming period (2007-2013) and with similar objectives, the European Maritime and Fisheries Fund (EMFF) was launched for the period 2014-2020.

The EFF for the period 2007-2013 had a global budget for all Member States of 3,849 million euros (EU, 2006). Spain was assigned the highest percentage of global financing, standing at 26.29% (€ 1,131,890,912)¹, in relation to the rest of European countries (Spanish Ministry for Agriculture, Fisheries and Food, 2019).

It should be mentioned that although the programming period of the EFF was 2007-2013, due to the rule known as "N + 2", which means that expenses can be justified during the two years following completion of this period, that is until the end of 2015, which has been the period analyzed in the work. A set of 705 projects financed through axis 4 have been analyzed with a total investment amounting to 69,810,864 €.

This EFF axis 4 is established to support sustainable development and quality of life improvement in fishing areas through local projects of sustainable development and diversification of economic activities. For this, it contemplates subsidy measures aimed at the diversification of activities that promote fishermen pluriactivity, either by promoting infrastructures and services related to fishing and tourism, provided that these activities do not lead to an increase in fishing, or through of the creation of jobs outside the fishing sector.

These measures should be implemented by the Fisheries Local Action Groups (FLAG), which represent public and private partners from different socioeconomic sectors,

¹ Data offered on the Spanish Ministry for Agriculture, Fisheries and Food website, based on the agreements assigned to the EFF for the period 2007-2013 that figures in Annex I of Regulation (EC) No. 1198/2006 (EU, 2006), including the 2% annual indexation

including the fishing sector. In the EFF period, 31 fishing groups were established in Spain.

However, conceptually defining the scope of the diversification of fishing activities is not easy. The EFF Regulation addresses the issue of diversification with a Local Development approach, as an instrument to maintain and promote employment in fishing areas. Understanding that the maintenance of economic and social prosperity in fishing areas does not necessarily have to happen for the restructuration of the sector, but it should be ensured through local strategies associated with diversification alternatives in other economic sectors such as tourism, culture, etc, in any case, in a manner compatible with an improvement of environmental quality in the coastal areas indicated as being in decline. For this, and among the available options, the regulation allows for investment in alternative economic activities that "reinforce the competitiveness of the fishing zones", whether or not they are directly related to the fishing industry, and independently of providing employment to fishermen or not.

This point does not cease to be controversial, since several agents consider that the diversification should be directed to activities closely linked to and for the fishing sector. For example, it is argued that the development of diversification tourism activities, such as leisure activities, restaurants or shops, should be focused on complementing and exerting a dissemination effect of the fishing sector and its products. Likewise, from this point of view, activities aimed at favouring the pluriactivity of fishermen outside the fishing sector should be focused as a socio-economic measure aimed at supporting fishermen's activities, thus allowing them to continue fishing part-time.

Among the activities of diversification, fishing tourism is an increasingly valued option by professional groups and organizations linked to the fishing sector. This has enormous potential, as it generates new ways of sustainable income, stable employment complementary to extractive activity, as well as creating a greater dynamism that improves the quality of life in coastal areas.

Fishing tourism activities, can be regarded as activities that seek to make the world of professional fishing compatible with the tourist demand in coastal areas. These include activities carried out on land (visits to fish markets, repair workshops for fishing gear, or to local shipyards, specialist shops where all kinds of nautical and marine items can be acquired, gastronomy linked to sea products or accommodation in fishermen's houses) as well as those that take place onboard a fishing vessel (fishing-tourism activities that consist of accompanying the crew during a fishing trip, enjoying and learning from professionals how to value the marine environment and its resources).

Although fishing-tourism is considered linked to usual fishing activity, the possibility of carrying out activities of Fishing-tourism at weekends, during periods of biological stoppage or within marine reserves, could be an interesting source of additional income to the traditional fishing activity, especially when fishing is prohibited. At the same time such activities would serve to raise awareness of the need to establish management measures for the fishing grounds, as well as to promote the environmental role of the fisherman.

In these cases, alternatives to fishing with professional gear can be explored, such as trips to provide tourists with a better understanding of marine environment resources, whale watching, birdwatching or the development of recreational fishing activities where professional fisherman act as instructors.

In this context, recreational fishing is presented as an activity that can maintain a mutually beneficial relationship with fishing-tourism. This synergistic relationship is based on amateur recreational fishermen's interest in having professional fishermen as companions and instructors, teaching and facilitating access to areas where the activity can be developed more effectively. Likewise, supervision by fishermen should serve to promote greater understanding of the marine environment,

These activities could be complemented with practical courses explaining the applicable legislation, biological aspects of species of interest and the main capture techniques, with the underlying focus on respect for the environment and the preservation of marine resources.

Likewise, the development of other fishing tourism activities, such as those related to trade, can enhance the connection between recreational fishing and commercial fishing. Shops related to fishing and the sea, are commercial spaces in which both visitors and tourists, as well as fishing enthusiasts and professional fishermen, can find items and objects related to the culture of the sea and fishing activities. An example of this is the 64 *Comptoir de la mer* shops (<https://www.comptoirdelamer.fr/>), created in 1999 by the artisanal fishing cooperatives of the French Atlantic coast.

3- Methodology

Due to the large number of projects, a database has been generated for the data collected by the Ministry of Agriculture, Food and Environment, sent in by each of the Spanish regions related to projects financed through Axis 4 of the EFF. The following information is included for each project:

- Description and objectives
- Promoter
- Geographic location
- Approval date
- Budget and subsidy
- Number of jobs generated
- Productive or non productive character

The final database collects information on 705 projects developed in 7 Spanish coastal autonomous communities (Andalusia, Asturias, Cantabria, Catalonia, Galicia, Canary Islands and Murcia) with a total investment of 69,810,864 €.

From the description and objectives of each project, a classification was made in four action areas: Tourism, Marketing and transformation, Environment and Social activities.

These four areas have been defined as the main fields in terms of fishing diversification from the Technical Working Group for Fisheries and Aquaculture Diversification (DIVERPES) of the Agricultural Ministry.

Within these areas, there is a distinction between productive projects (those with a lucrative purpose and that follow a business logic) and non-productive projects (those carried out with non profitable aims and that are usually promoted by public institutions, NGOs, research centres, etc).

Investments directed at tourism, both in productive and non-productive projects, amounted to € 39,185,479, which represents more than half the total investments analyzed. Investments in productive tourism projects amounted to € 29,319,745 and non-productive projects € 9,865,734.

174 non-productive projects appeared in the tourism area, which were distributed in 8 categories (Table 1):

Table 1. Categories of non productive projects within the Tourism group

Description of the categories	Code	Investment
Gastronomic events and promotion materials for fishery products	TU01	1,283,108 €
Recovery of knowledges and traditions of the fishing world	TU02	1,098,203 €
Tourist routes: sea, coast and fishing	TU03	2,196,377 €
Websites, apps, promotional actions and tourist dissemination	TU04	2,268,597 €
Organization of visits	TU05	204,462 €
Adaptation of infrastructures and fishery services for tourism	TU06	1,664,347 €
Museums and permanent exhibitions	TU07	653,931 €
Organization of nautical and diving events or activities	TU08	496,710 €

Source: own elaboration

Of these 8 categories we have focused on the projects in category TU08 "Organization of nautical or diving events or activities" that includes recreational fishing. In this category there are a total of 10 projects with funding, although it is noted that none aim to link professional fishing with recreational fishing, being mostly focused on boating activities such as rowing, sailing and scuba diving.

Consequently, for our analysis, we have only focused on productive projects. Due to the diversity of projects and themes, more specific categories were defined within each of the four areas. Thus, within the Tourism area, which included a total of 172 productive projects, 9 categories were defined (Table 2 and Fig. 1).

Table 2. Description of the categories of productive projects within the Tourism group

Description of the categories	Code
Tourist accommodation: buildings recovered and adapted for use as apartments or hotel rooms	TUP01

Gastronomy linked to the fishing sector: Newly created restaurants offering seafood cuisine	TUP02
Other restaurant activities: Other restaurants that are not exclusive to seafood products	TUP03
Tourist adaptation of fishing infrastructures and services: Adaptation of fishing facilities so that they can be visited by tourists.	TUP04
Commercialization of fishing crafts and fishing articles: Shops and sale of products of artisanal and fishing origin	TUP05
Pescaturismo: Tourism activities onboard fishing vessels	TUP06
Services of nautical tourism, diving, tourist boats: Coastal activities related to nautical and marine sports	TUP07
Web or tourism promotion and dissemination applications: Online platforms to publicize the offer of tourist activities in the coastal area	TUP08
Other infrastructures and tourist services: Material resources or improvements to support the local tourist network	TUP09

Source: own elaboration

Once this classification of 9 categories was established, research was focused on analyzing in detail the projects of the category TUP07 "Services of nautical tourism, diving and tourist boats", which has a total of 48 subsidized projects.

When the projects for analysis were identified, we set out to prove the hypothesis that "the European fisheries diversification funds represent an opportunity for the emergence of businesses and activities that connect professional fishing with recreational and nautical fishing". We set ourselves the objective of identifying those subsidized projects that effectively connect traditional fishing with recreational and nautical fishing.

For this we established three types of relationship. In the first, recreational fishing and boating create employment (or additional income) among professional fishermen; in the second, the projects value the product of professional fishing and, in the third, the projects promote the fishing culture of the area.

To see if the projects comply with any of these conditions or not, the "description" section of the database was the main focus. In this section the promoters of the projects briefly outline their activity. Projects were analyzed one by one. If they explicitly acknowledged being promoted by a fisherman or a direct family member or hiring fishermen it is understood that they fulfil the first requirement. If the activity was related to the promotion or the use of any of the sea products characteristic of the area, it is considered that they comply with the second. And if they explicitly recognize as one of their objectives the promotion of the fishing and marine culture of the area, they are considered to fulfil the third requirement.

4- Analysis

A first analysis of the figures clearly showed the importance of tourism within fishery diversification in Spain. Of the 18,870,455 € with which productive projects were financed, 12,268,821 € went to tourism projects. In other words, 65% of the money allocated by the EFF to business diversification projects went to tourism initiatives.

The 12,268,821 € allocated to tourism financed a total of 172 projects involving a total investment of 29,319,745 €.

As already indicated, for a more in depth analysis, the tourism area was divided into nine categories. This way, the total investment by categories is as follows (Table 3):

Table 3. Investment in productive projects within the Tourism group.

Code	Tourism	Investment
TUP01	Tourist accommodation	10,967,705 €
TUP02	Gastronomy linked to the fishing sector	7,594,937 €
TUP03	Other restaurant activities	2,693,609 €
TUP04	Tourist adaptation of fishing infrastructures and services	0 €
TUP05	Commercialization of fishing crafts and fishing articles	455,587 €
TUP06	Pescaturismo	0 €
TUP07	Services of nautical tourism, diving, tourist boats	5,551,346 €
TUP08	Web or tourism promotion and dissemination applications	1,223,253 €
TUP09	Other infrastructures and tourist services	829,507 €

Source: Own elaboration.

As can be seen, the vast majority of projects related to tourism are linked to the hospitality industry, a sector that falls into the first three categories: tourist accommodation (TUP01) and gastronomy (TUP02 and TUP03) and that involve over 70% of the total investment.

The key area in this analysis is the category TUP07 "Services of nautical tourism, diving and tourist boats" where 5,551,346 € was invested. This area occupies the third position in terms of importance for subsidies granted within the tourism area and is the only category of any real significance after that of hospitality. We must also point out that in the category TUP06 Pescaturismo Services there are no funded projects, due to the legislative changes at a Spanish level that affect this activity and that allow for its practice were not yet operational in the analyzed period.

The analysis involved the collection of specific information for each of the projects financed in the TUP07 category (48 projects). The vast majority were nautical projects, with subsidies aimed at acquiring, repairing or even renting nautical or sports boats, adapting nautical facilities, creating nautical or diving schools, fishing or nautical product retail, etc.

The detailed analysis of the 48 projects found a relationship between nautical and traditional fishing in 12 projects. Following the methodology explained, six projects were

found to create employment in the fishing sector, either because of the commitment to hire fishermen (or family members) or because they were initiatives that arose from sea workers, either active or retired.

Two of the projects are aimed at the practice of sport fishing on board professional vessels. The objective is to develop initiation or improvement activities in recreational fishing at the hand of traditional fishermen who pass on knowledge and professional practices. This means, people participating in this leisure activity come into contact with a way of life that implies a different way of understanding the sea.

Three projects are aimed at the commercialization of naval and recreational fishing equipment in fishing ports and surroundings. Being an initiative that comes from the traditional fishing sector, advice by expert fishermen is available, in addition to offering professional quality products at reasonable prices.

Another project, with the objective to favor economic diversification for family members of professional fishermen, focuses on the development of an online platform and a mobile app for the management and promotion of activities related to recreational fishing.

Regarding the two projects related to fishing products, both emphasize putting value on the product. One is aimed at adding value to local fish products, linking the activity with the gastronomy and ecotourism of an area of special environmental value. The other project, promoted by a leading company in the capture and commercialization of bluefin tuna, seeks to enhance its product through tourism activities. These include raising awareness of the process of capturing and feeding tuna, for example with visits by catamaran to the feeding enclosures where visitors can swim among the tuna or with tuna tasting events.

Finally, four initiatives aimed at promoting the fishing culture of the area. Done by the creation of tourist routes, by promoting activities or by conditioning spaces related to fishing. This seeks to integrate fishing activities with the biodiversity and ecosystem conservation.

The total sum of funds allocated by the EFF to these twelve projects was 610,692 €, which accounts for about 11% of the total amount spent in this category (TUP07). The total investment of these projects was 1,837,214 €, which means that, on average, a third of the total investment in each project was subsidized. The size of each initiative was very irregular, therefore the subsidy granted in each case varied hugely, ranging from 3,000 € for a sport fishing activity to 187,000 € for the construction of a catamaran.

Figure 1. Tourism investment distribution by projects in TUP07 and location in Spanish coastal regions.

Source: own elaboration

5- Conclusions

The conclusion of the analysis is that there are indeed projects that unite recreational fishing and professional fishing, however, quantitatively they are still scarce (both in number and funds granted, standing at about 20% of the total of the nautical and sports projects subsidized). Recreational and professional fishing remain two parallel realities, between which it is difficult to create connections. However, if sport fishing is going to capture a significant part of fishing diversification funds (around 19%) it will have to count on the professional fishing sector and especially on fishermen. These figures justify the traditional fishing sector fear, that the fisheries diversification funds end up in the hands of other sectors, mainly linked to tourism.

In fact, the analysis does not show many collaborative projects between both sectors, although it is true that some isolated initiatives have begun to appear, showing an important potential opportunity. The possibilities are numerous and very diverse. The hiring of professional fishermen as experts in the field and the environment; the complement of fishing income with nautical or sports activities; the promotion of fishing culture and products by nautical or sports clubs.

In any case, there is much to still be done. Although the European fisheries diversification funds are important for this transition, we consider that there are other aspects that should be addressed:

- The direct participation of organizations of professional fishermen (guilds and / or cooperatives) as promoters or partners in the initiatives to be developed, so that fishermen and their families can be the main beneficiaries.
- The use of the existing fishing sector infrastructures (port facilities, boats and services attached to fishing) adapting and modernizing them for new uses.

- The involvement of local administrations and organizations representing recreational fishermen, establishing channels for their participation and spread of information on the benefits generated for the community.
- Training aimed at facilitating dialogue between professional fishermen and new users (recreational fishermen, tourists interested in knowing the marine environment, ...) that serves to promote knowledge of the marine environment and sustainable ways of fishing.

In short, professional (and especially traditional) fishing must see an ally in sport and recreational fishing and not an enemy that competes for resources. If traditionally both sectors have competed for the fishing resource (including the port area or the use of other resources), this competition should not extend to European fund allocation, initially created for the diversification of the professional fishing sector, but which has been extended to include other groups. Before it is too late, the funds should be redirected to activities that have a positive impact on the fishing sector, involving fishermen in nautical or recreational fishing activities. The nautical and professional fishing sectors should seek a collaboration. They are forced to live side by side, but the bridges and synergies that should exist between them, will only emerge by working together and by being aware of the potential benefit of the other. In this sense, the European funds (both the EFF studied here and the current EMFF) should be an instrument for collaboration and the search for synergies and complicities.

The fishing sector must seek the complicity of the nautical, sports or tourism industry, since it can mean a job, a complement to the dwindling fishing revenues and a solution for generational renewal.

Reference list

Bower S.D., Nguyen V.M., Danylchuk A.J., Beard T.D. Jr & Cooke S.J. (2014). Inter-sectoral conflict and recreational fisheries of the developing world: Opportunities and challenges for co-operation. In: P. McConney, R. Medeiros & M. Pena (eds) Enhancing Stewardship in Small-Scale Fisheries: Practices and Perspectives. Too Big To Ignore (TBTI) and Centre for Resource Management and Environmental Studies, The University of the West Indies, Cave Hill Campus. CERMES Technical Report No. 73, pp. 88–97

EU (2006). COUNCIL REGULATION (EC) No 1198/2006 of 27 July 2006 on the European Fisheries Fund.

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32006R1198&from=ES>

EU (2004). Fishing in Europe, guaranteeing sustainable fisheries, vol. 21. http://elibrary.lt/resursai/ES/Leidiniai/fishing/mag21_en.pdf

EU (2007): Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - An Integrated Maritime Policy for the European Union.

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52007DC0575>

Gordoa, A., Dedeu, A.L., Boada, J. (2019). Recreational fishing in Spain: First national estimates of fisher population size, fishing activity and fisher social profile. *Fisheries Research*, Volume 211, pp 1-12

Holdsworth, J.C., Hartill, B. W. Heinemann, A., Wynne-Jones. J (2018) Integrated survey methods to estimate harvest by marine recreational fishers in New Zealand. *Fisheries Research*, Volume 204, pp 424-432

Hyder, K, Radford, Z, Prellezo, R, Weltersbach, MS, Lewin, WC, Zarauz, L, Ferter, K, Ruiz, J, Townhill, B, Mugerza, E, & Strehlow, HV, (2017), Research for PECH Committee – Marine recreational and semi-subsistence fishing - its value and its impact on fish stocks, European Parliament, Policy Department for Structural and Cohesion Policies, Brussels.

[http://www.europarl.europa.eu/RegData/etudes/STUD/2017/601996/IPOL_STU\(2017\)601996_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2017/601996/IPOL_STU(2017)601996_EN.pdf)

Lewin, W. C., Arlinghaus, R., & Mehner, T. (2006). Documented and potential biological impacts of recreational fishing: insights for management and conservation. *Reviews in Fisheries Science*, 14(4), 305-367.

Llompart F.M, Colautti, D.C., Baigún, C.R.M. (2017) Conciliating artisanal and recreational fisheries in Anegada Bay, Argentina *Fisheries Research*, Volume 190, , pp 140-149

Morales-Nin, B., Moranta, J., Garcia, C., Tugores, M.P., Grau, A.M., Riera, F. & Cerda, M. (2005). The recreational fishery off Majorca Island (western Mediterranean): some implications for coastal resource management. *Ices Journal of Marine Science* 62, 727-739.

Sheaves M., Baker R., McLeod I., Abrantes K., Wani J. & Barnett A. (2016). The conservation status of Niugini black bass: a world-renowned sport fish with an uncertain future. *Fisheries Management and Ecology* 23, 243–252.

Solstrand M.-V. (2013). Marine angling tourism in Norway and Iceland: finding balance in management policy for sustainability. *Natural Resource Forum* 37, 113–126.

Spanish Ministry for Agriculture, Fisheries and Food, (2019). Fondo Europeo de la Pesca. Reparto Financiero. Available at:

<https://www.mapa.gob.es/es/pesca/temas/fondos-europeos/-que-es-el-fep-/reparto-financiero/default.aspx>

Voyer, M., Barclay, K., McIlgorm, A. and Mazur, N. (2017) Connections or conflict? A social and economic analysis of the interconnections between the professional fishing industry, recreational fishing and marine tourism in coastal communities in NSW, *Australia Marine Policy*, Volume 76, pp 114-121