PRESPO

CEP REPORT

Desarrollo sostenible de las pesquerías artesanales en el Arco Atlántico

Analysis and socioeconomic characterization of the artisanal asturian fleet.

May 2011

ATLANTIC AREA Transnational Programme
ESPACIO ATLÁNTICO Programa Transnacional
ESPACE ATLANTIQUE Programme Transnational
ESPAÇO ATLÂNTICO Programa Transnacional

European Union
ERDF Funds

Investing in our common future

Analysis and socioeconomic characterization of the artisanal asturian fleet.

Head of the scientific research:
Prof. Dr. Miguel Ángel Álvarez García[1]

Technical coordination:
Lucía García Flórez[2]

Authors[1]:
Javier González Alvarez
Laura García de la Fuente

Other participants[1]:
Prof. Dr. Carlos Nores Quesada
Mª Ángeles Cano Parra
Ana Finat Sáez
Prof. Dr Ana Mª Colubi Cervero
Dr. Pilar García Manteca
Arturo Colina Vuelta

1 Natural Resources and Spatial Planning Institute (INDUROT), University of Oviedo.
2 Centro de Experimentación Pesquera (CEP)

GOBIERNO DEL PRINCIPADO DE ASTURIAS
CONSEJERÍA DE MEDIO RURAL Y PESCA

Instituto de Recursos Naturales y Ordenación del Territorio
UNIVERSIDAD DE OVIEDO

Indurot

Recommended citation:

González Álvarez, J., García de la Fuente, L., 2011. Analysis and socioeconomic characterization of asturian artisanal fleet. *CEP Report of project PRESPO*, pp. 48.

1. Introduction

Artisanal fisheries provide food and income to millions of people. Actually, the FAO (2005) has estimated that approximately 35 millions of fishermen around the world (90% of the total) can be considered as artisanal fishermen[1]. However, despite the importance of these fisheries, the concept of artisanal fisheries is still dependent on the geographical context and there is not a universally accepted definition. Normally, terms as "artisanal", "small-scale" or "traditional" are used indistinctly in opposition to the industrial or semi-industrial fisheries. The Spanish members participating within the PRESPO Project have accorded, at least until a definitive segmentation criteria is achieved, to consider as artisanal those boats listed as "artes menores" in the Census of the Operating Fishing Fleet (CFPO)[2]. The main characteristics of this fleet, described below, match up perfectly with the general concept of artisanal fisheries:

- "Artes menores" fleet is composed by small sized boats (normally under 12 m) that operate in shallow waters close to the coastline. These vessels capture mostly benthic resources within the continental shelf, although they can also capture some pelagic resources with artisanal fishing gears;
- Their fishing strategies differ from those applied by industrial or semi-industrial fisheries: the "artes menores" fleet is characterized by its flexibility, with a differentiate exploitation pattern depending on the objective species or the fishing gear utilized. The vessels are conceived to be multi-gear, changing frequently between different fishing gears along a single fishing season;
- From a technological point of view, "artes menores" vessels normally use low technological equipment and a low level of capitalization;
- The activity normally presents a traditional structure, where it is common the existence of family ties between the crewmembers and the know-how has been transmitted from fathers to sons for generations;
- Finally, one of the main characteristics of this fleet segment is its heterogeneity in terms of fishing gears, fishing grounds, technical characteristics, etc. This fact, common to all artisanal

[1] Moreover, over a 100 million people are employed within artisanal fisheries' dependent sectors.

2 This census category has no direct translation or equivalency into the European existent categories for the fleet classification, and vessels belonging to the "artes menores" census category are usually included in the wide group called "Miscellaneous". Nevertheless, the authors consider the expression "*Minor gears*" as the most suitable term to translate the local category known as "artes menores" (in Spanish), because this group is not exactly equivalent to ""Miscellaneous" (as it may also include other gears or "métiers" different from the minor gears previously referred).

fisheries, explains why it is so difficult to establish a common and uniform criterion to define the artisanal fleet at an international, European or even national level.

Speaking about the asturian region, the richness of the Cantabrian fishing grounds has motivated the development of an important fishing fleet, which currently is made up of 327[3] vessels distributed along 20 fishing harbors and organized around 19 fishermen organizations. These fishermen organizations, named "Cofradías", are public law corporations that act as a consulting and collaboration bodies with the administration in the promotion of the fishing sector, at the same time that defend the economic and corporative interests of the fishing sector. In terms of the fleet's technical characteristics, these 327 vessels accounts for a total engine power of 31 265 kw, 8 624 GT of fishing capacity and an average length of 11.49 m (Table 1). The "artes menores" vessels represent a 71% of the total regional fleet:

Table 1. Asturian fleet characteristics by Census category. 2010*.

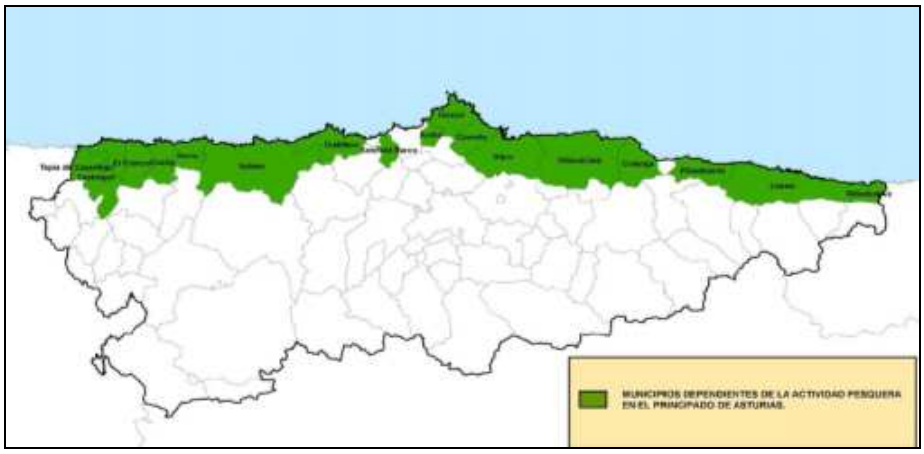
Census	Vessels	Length (m)	Gross Tons (GT)		Engine power (Kw)	
			Total	Mean	Total	Mean
Arrastre de fondo en Cantábrico NW (*bottom trawls*)	11	28.12	2 400	218.16	4 120	374.55
Artes fijas en zonas CIEM VB, VI, VII y VIII abde. *(passive arts in international waters)*.	8	30.07	2 101	262.62	3 824	478.00
Artes menores en Cantábrico NW *(minor gears)*	233	8.79	1 060	4.55	11 854	50.88
Cerco en Cantábrico NW *(purse seine)*	8	20.98	539	67.46	2 088	261.00
Palangre de fondo en Cantábrico NW *(longlines)*	40	12.14	523	13.09	3 337	83.43
Palangre de fondo menores 100 TRB en VIII abde. *(long-lines in international waters)*	10	24.27	1 430	143.04	3 454	345.40
Rasco en Cantábrico NW *(set gillnets)*	6	14.05	107	17.89	777	129.50
Volanta en Cantábrico NW *(set gillnets)*	11	16.25	462	42.00	1 811	164.64
TOTAL	327	11.49	8 624	26.37	31 265	95.61

* Date of reference: June 2010.

The important fishing activity developed in Asturias and its spatial distribution along the whole coastline have contributed in the employment creation on the coastal zones and, as a consequence, to stabilize the population level in coastal communities (Figure 1). Currently, the fishing fleet sums up

[3] Data from the Census of the operating Fishing Fleet of june 2010.

1 185[4] crewmembers[5], or 1 634 if the whole workers that develop their activity in the fishing sector are taken into consideration. In macroeconomic terms, the fishing sector contributed in a 0.27% to the Gross Value Added generated by the regional economy in 2007. Although such percentage does not look very high on regional terms, it is important to note that it is generated just on coastal communities, where its impact is quite significant. Finally, beyond its importance in the generation of employment and income in coastal communities, the artisanal fisheries in Asturias constitute a fundamental cultural and traditional identity factor at a regional level.



Source: Strategic National Plan for the European Fisheries Fund 2007-2013.
(Original title: "Plan Estratégico Nacional del Fondo Europeo de Pesca").
Figure 1. General municipality classification according to their dependence level on the fishing sector.

However, and despite the importance of this fleet for the socioeconomic and cultural development of the coastal communities, there is little information available in terms of its activity, employment level, profitability, etc. As a consequence, with the main objective of completing and improving currently available information on artisanal fisheries, an in-depth socioeconomic survey has been designed and implemented.

2. Materials and methodology

2.1 Survey design

One of the main objectives of Activity 2 - "Knowledge and information management" - of PRESPO project is to gather, complete and improve available information about artisanal fisheries from the Atlantic Arc with the objective of facilitating an effective and sustainable management. Moreover, the

[4] Data from the Maritime Social Institute (ISM) and the *Artisanal Fisheries Socioeconomic Survey* (INDUROT, 2009-2010).
[5] There is only available data for 300 vessels, which sums up 1 072 crewmembers. The crew of the remaining 27 boats has been estimated according to the average crewmembers per census category.

new management strategies must integrate into the decision system new socioeconomic considerations to complement the biological and technical data. In accordance with this objective, an in-depth socioeconomic survey to the artisanal fishing sector has been designed. The sampling method has been face-to-face interviews with artisanal ship-owners, as they are the only ones that have access to the confidential economic information gathered. Complementary to these, some other interviews were carried out with several presidents of "Cofradías", due to the valuable information that they provide as result of years managing this kind of fishermen organizations. The questionnaires applied are shown in the final Appendix (in Spanish). The information gathered through the interviewing process can categorized and resumed in three main sections:

- Fishing effort: information regarding days at sea, fishing grounds and métiers utilized by artisanal fisheries in Asturias;
- Socioeconomic information: aimed to gather information about incomes and costs' structure of artisanal vessels, as well as characteristic management models and social aspects of the artisanal fishing sector;
- Currents difficulties and potential responses: it has been considered necessary to collect the perceptions of the fishermen sector regarding the main difficulties or constraints faced currently by the artisanal sector in Asturias and which would be the most appropriate management responses to such issues.

In order to facilitate the exploitation and analysis of the data, at the end of the survey a quality control section was incorporated where the interviewer could assess the reliability of the responses. The objective of such section was to allow the rejection of no-representative or poor quality data. On the other hand, the information collected through the survey was completed with statistical and administrative data from official sources.

2.2 Sampling process

It was established as the objective population the whole artisanal fleet from Asturias, considering as artisanal either those boats listed under "artes menores" in the Census of the Operating Fishing Fleet (CFPO) or those boats listed in other census but that fish under a license for "artes menores". It was considered as sufficiently representative a sample of two thirds of such fleet according the 2010 census (154 vessels). A stratified sampling method has been used based on the distribution of boats by

fishing port, aiming at avoiding any infra or supra representation of any fishing port. In total, 149 interviews were carried out (64% of the artisanal fishing vessels) along the 18 fishing ports of Asturias. The final relation of interviews is presented in Table 2:

Table 2. Socioeconomic surveys carried out.

Fishing harbour	Sample objective[1]	Surveys carried out by National census					
		"Artes menores"	Long-lines	Gillnets (Rasco)	Bottom trawls	Others[2]	Total
Avilés	6	2	1	0	1	0	4
Bañugues	4	0	0	0	0	0	0
Bustio	3	2	0	1	0	0	3
Candás	5	4	0	0	0	0	4
Cudillero	26	21	9	0	0	0	30
Figueras	3	3	0	0	0	0	3
Gijón	10	10	1	0	0	0	11
Lastres	7	6	0	0	0	0	6
Llanes	5	7	0	0	0	0	7
Luanco	13	13	1	0	0	0	14
Luarca	22	21	1	0	0	0	22
Ortiguera	1	1	0	0	0	1	2
Oviñana	6	3	0	1	0	0	4
Puerto de Vega	10	10	1	0	0	0	11
Ribadesella	5	5	0	0	0	0	5
S. J. de la Arena	11	5	0	0	0	0	5
T. de Casariego	5	5	0	0	0	0	5
Tazones	7	8	0	0	0	0	8
Viavélez	5	4	0	0	0	1	5
TOTAL	154	130	14	2	1	2	149

[1] Set up as 66% of the vessels registered as "Artes Menores" in the national census.

[2] Surveys carried out to presidents of fisherman organizations although they did not have currently any fishing boat.

It is important to highlight that the response rate has not been uniform along the different questions or sections of the survey. As a consequence, depending on the issue analyzed there will be a different sample size on which such analyses are based[6].

3. Results

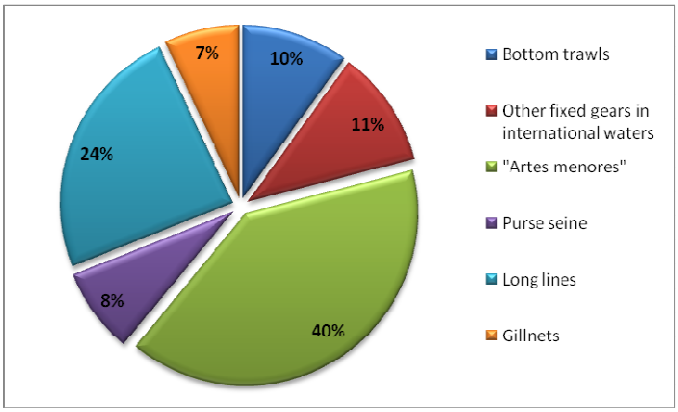
3.1 General aspects

The artisanal fishing fleet contributes considerably to the socioeconomic and cultural development of the coastal areas of Asturias. Although the artisanal fleet generates a small percentage of the Gross Value Added of Asturias, it has an essential multiplicative effect over other dependent economic

[6] The simple size will be shown for each of the analysis, tables or graphs presented along this document.

sectors such as the tourism industry, equipment production and reparation, etc. Moreover, the artisanal fleet constitutes an important factor of cultural identity at a regional level, attached to the knowledge and ways of life of the traditional fishing communities. Thus, this segment preserves a rich human capital and a traditional knowledge based on the experience and the generational learning.

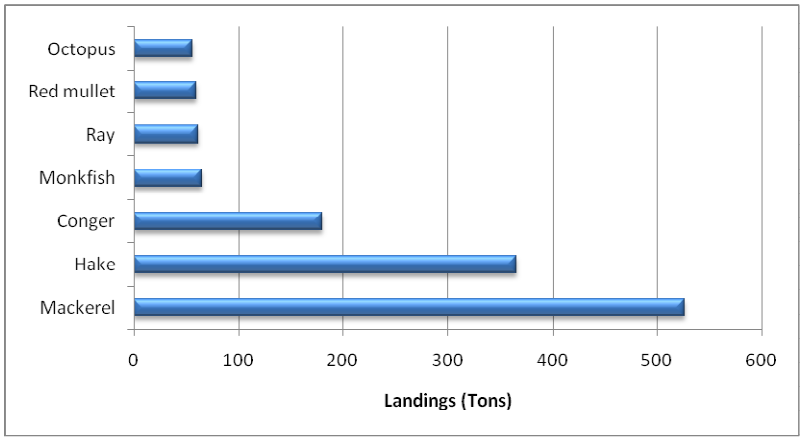
On the other hand, and as it has been stated above, despite the lack of a common definition of artisanal fleet, the segment of "artes menores" is the fleet that best fits with the concept of artisanal fisheries. This fleet represents the 71% of the total regional fleet (233 vessels with a mean length of 8.79 m) and accounts for 40% of the fishermen from Asturias (477 crewmembers, 2.05 people per boat) (Figure 2). Moreover, artisanal fisheries promote indirect employment, and it is estimated that for each artisanal fisherman another three jobs are generated in other activities related with the artisanal fishing sector.



Source: Own elaboration according to data from the Maritime Social Institute and the information gathered through the socioeconomic survey to the artisanal fisheries in Asturias (2009-2010).

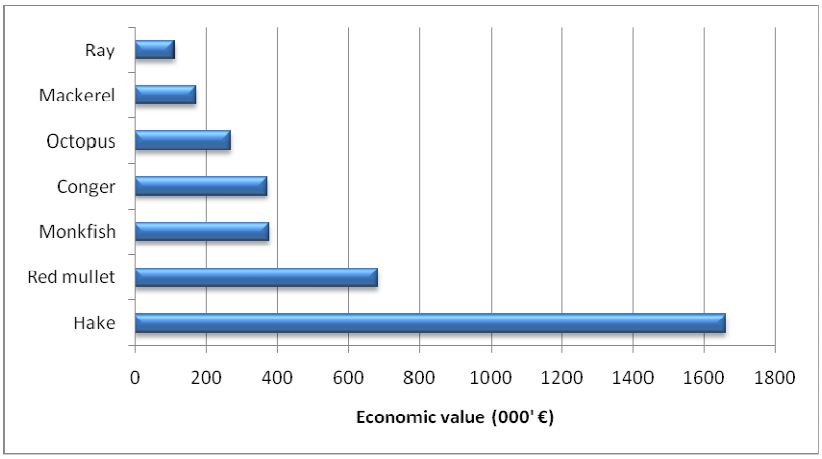
Figure 2. Percentage of crewmembers per fishing census in Asturias.

Although the landings from "artes menores" in kilograms only represents the 11% of the captures (1 719 950.69 kg), they sum up the 29% of the total economic value generated from such landings (see Figure 3 and Figure 4). This difference is explained by the higher first sale price of the captures from the artisanal fleet compared with those from other fleet segments: an average of 4.25 €/kg vs. 1.68 €/kg in 2009. These landings are distributed between a high diversity of species, confirming the multi-gear and multi-specific character of the artisanal fleet. In contrast, there are seven species of special relevance in terms of captures and economic value for this segment of the fleet: mackerel (*Scomber scumbrus)*, hake *(Merluccius merluccius)*, conger *(Conger conger)*, monkfish *(Lophius piscatorius)*, ray *(Raja radula)*, red mullet *(Mullus surmuletus)* and octopus *(Octopus vulgaris).*



Source: Own elaboration from the data provided by the regional fishing authorities.

Figure 3. Main landings from the "artes menores" fleet in Asturias. 2009.



Source: Own elaboration from the data provided by the regional fishing authorities.

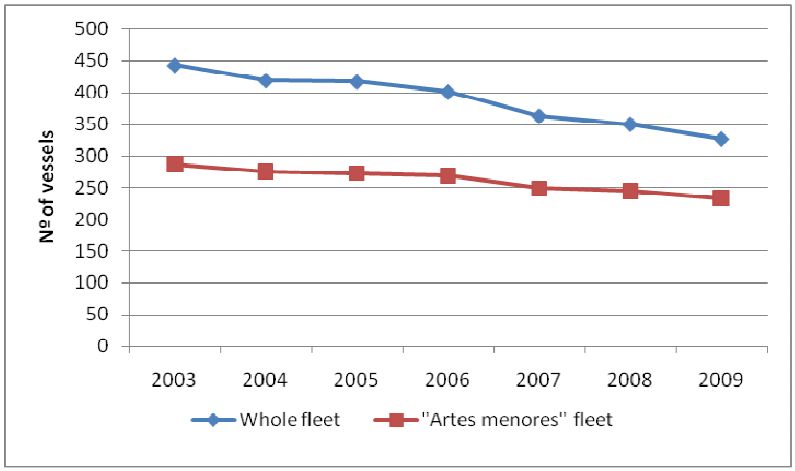
Figure 4. Total economic value of the captures of the "artes menores" fleet in Asturias. 2009.

However, despite its importance in terms of number of vessels, employment generation and social impact, there is little information available regarding the fishing activities and characteristics of the artisanal fleet. Actually, there is a lack of information that would be necessary for an efficient and sustainable management of this fleet segment. This circumstance limits an adequate estimation of important parameters such as the biological evolution of the exploited species, the economic efficiency or the real capacity of the fleet and, as a consequence, it constraints the design of adequate and efficient management actions and regulations. Because of that reason, it is essential to complete and improve currently available information in order to put in place management strategies, lines and actions to promote a sustainable management of the artisanal fisheries in Asturias. The design and implementation of a socioeconomic survey to two thirds of the artisanal fleet from Asturias carried out within the activities of Working Group 2 of PRESPO project have been really useful to characterize

and to advance in the knowledge of the artisanal fishing activities. The main results and conclusions obtained are resumed below:

3.2 Evolution of the fishing power and of other technical and socioeconomic characteristics

Although the artisanal fleet is the segment with a greater number of vessels in Asturias, its importance in terms of fishing power is much lower: the "artes menores" fleet only accounts for the 12% of the total gross tons and 38% of the total engine power of the regional fleet. Both the number of artisanal vessels and the number of crewmembers have been reduced considerably between 2003-2009 (a 19% and a 27% respectively). If this tendency is not reverted it may jeopardize the long-term sustainability of artisanal fisheries in Asturias. On the other hand, it is also important to point out that such reduction has been less intense that the one experimented by other fleet segments (Figure 5):



Source: Own elaboration from data of the Census of the Operating Fishing Fleet (CFPO).
Figure 5. Evolution of the nº of vessels for the whole and artisanal fleet. 2003-2009.

Three structural problems may explain this decreasing tendency:

- The low profitability of the fishing activities;
- The lack of generational replacement and the difficulties to create of maintain job positions;
- The finalization of European subsidies for the construction of fishing vessels after the 2002 CFP reform and the establishment of new incentives to scrap fishing boats.

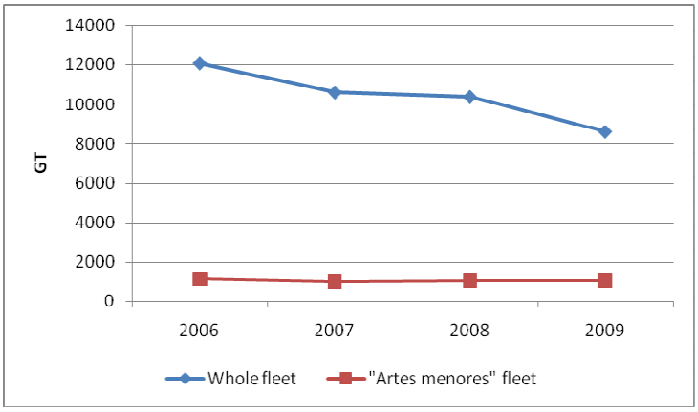
These problems, in conjunction with other factors such as the exhaustion of the maritime resources and the organizational complexity of the artisanal fishing sector, set up hurdles to the maintenance of the artisanal activities in the mid/long-term.

Table 3. Evolution of the main technical characteristics of the asturian fleet in the period 2006-2009.

Characteristics	Fleet segment	2006	2007	2008	2009
Gross tons (GT)	Whole fleet	30.10	29.20	29.67	26.37
	"Artes menores"	4.20	4.05	4.27	4.55
Engine power (kW)	Whole fleet	101.27	98.41	99.96	95.61
	"Artes menores"	47.51	47.44	49.33	50.88
Average lenght (m)	Whole fleet	11.63	11.52	11.63	11.49
	"Artes menores"	8.40	8.47	8.61	8.79
Average crew	Whole fleet	s/d	3.94	3.71	3.57
	"Artes menores"	s/d	2.64	2.42	2.05

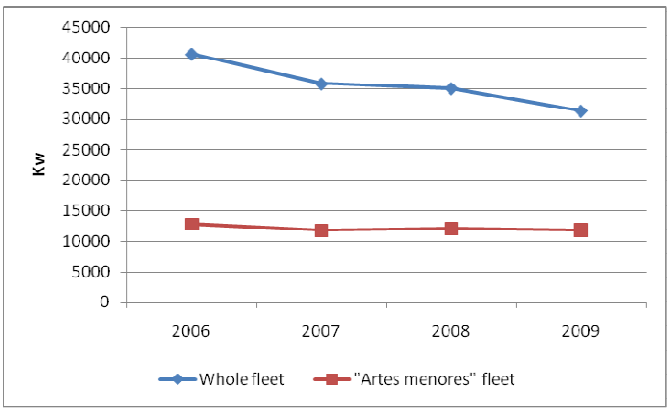
Source: Own elaboration from data of the CFPO.

Analyzing the evolution of the main technical characteristics (Table 3) it can be observed that despite the reduction of vessels and crewmembers, the total engine power and gross tons of the artisanal fleet has kept more or less constant during the last years (Figure 6 and Figure 7). This can be explained by the fact that this fleet segment has taken advantage of the maintenance of the European subsidies for the modernization and improvement in the security measures of the European fleets.



Source: Own elaboration from data of the CFPO.

Figure 6. Evolution of the total gross tons (GT) for the whole and artisanal fleet. 2003-2009.

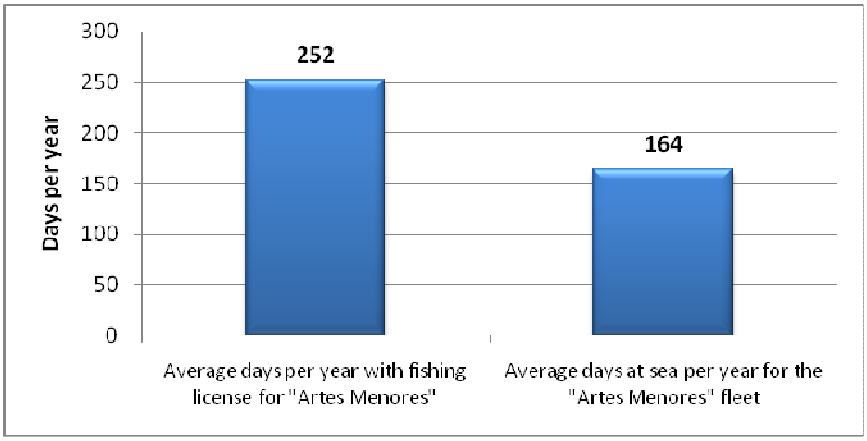


Source: Own elaboration from data of the CFPO.

Figure 7. Evolution of the total engine power (kW) for the whole and artisanal fleet. 2003-2009.

3.3 Days at sea and fishing grounds

Previously to this socioeconomic survey there was no exact information regarding the days of activity of the artisanal boats in Asturias. The only available information was the number of days for which each vessel had a fishing license. The data gathered through the interviewing process shows that the average number of days per boat with fishing license overestimated the real number of days that each boat went out fishing, as it can be observed in Figure 8:



Source: Own elaboration.

Figure 8. Average "real" fishing days vs. average days with fishing license per year.

Other potential source of information regarding days at sea are the daily sell notes in the fishing port, but currently it is impossible to access to this type of information given the way in which it is organized at an administrative level. Consequently, it is essential that the fishing administration increases its efforts in terms of monitoring and collection of information of days of activity, as well as to adequately integrate the correspondent data bases allowing the statistical exploitation of the readily available information. Another significant aspect was the corroboration of the relation between days of fishing and the length of the vessels (Table 4). The smallest boats depend much more on climatic conditions, making more difficult the achievement of a stable income flow and, thus, generating problems of long-term economic sustainability and workforce stability.

Table 4. Average fishing days per length category.

Lenght category (m)	Number of vessels	Average fishing days	Standard deviation
<10 meters	83	159	36
≥10 - <12 meters	40	171	26
≥12 - <18 meters	23	178	27
≥18 meters	1	200	-

Source: Own elaboration.

In terms of fishing grounds, the survey has allowed the collection of data about the areas where artisanal vessels normally operate. The data analysis showed that the vessels from the same fishing harbour usually fish in the same areas, only varying depending on the fishing gear used:

Table 5. Frequency of responses regarding distance from the coast where the artisanal vessels develop their activity in relation with the national census and the fishing gears.

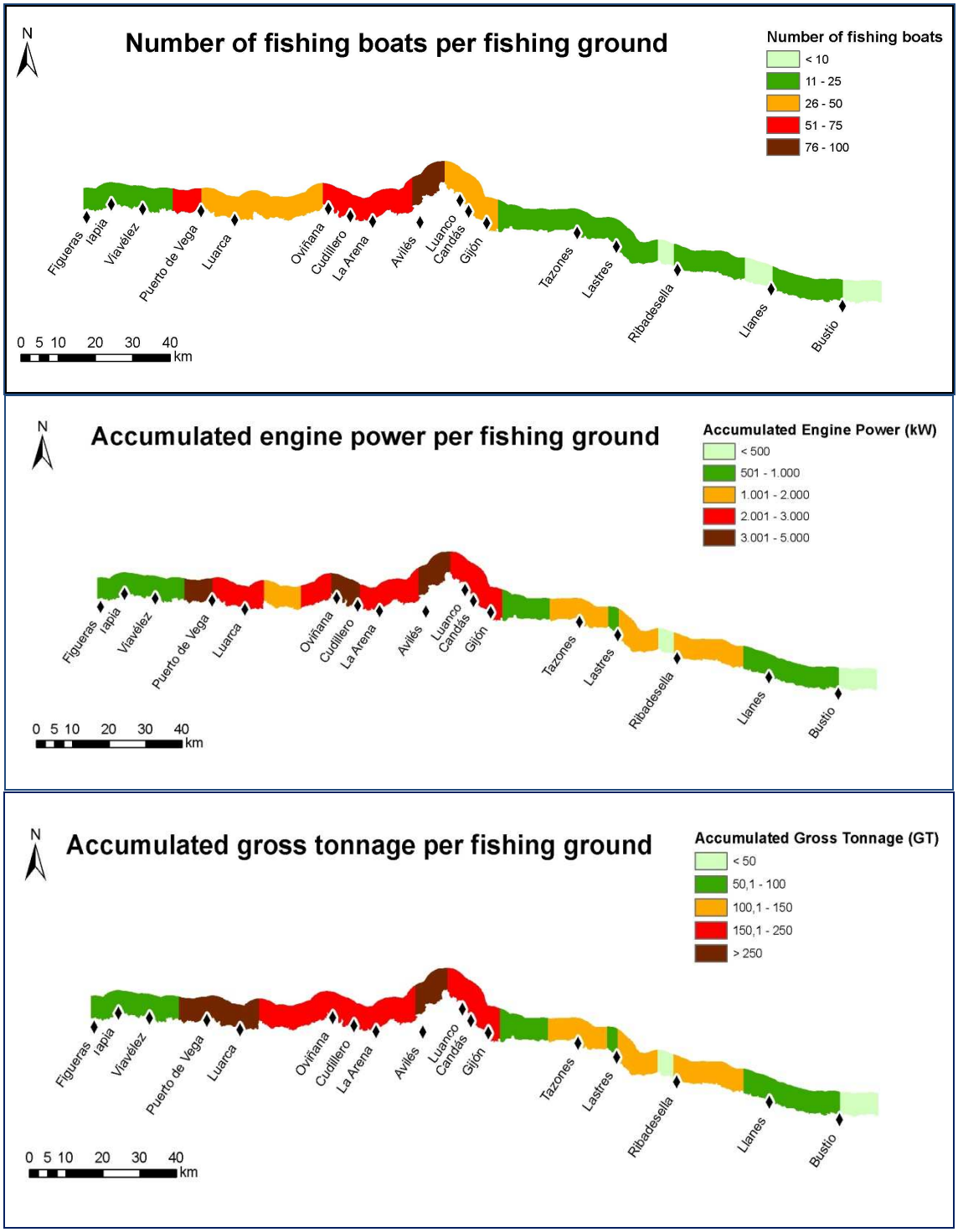
National census	Fishing gears	≤ 3 miles	≤ 12 miles	> 12 miles	Responses
"Artes menores"	Nets, Pots and Traps Young eel	122	9	0	131
	Hooks	10	19	3	32
Long-lines	Nets, Pots and Traps Young eel	2	2	0	4
	Hooks	0	1	2	3
	Set Long-lines	0	7	5	12
Set Gillnet (Rasco)	"Rasco"	0	2	0	2
Bottom trawls	Bottom trawls	0	1	0	1
	TOTAL	134	41	10	185

Source: Own elaboration

The integration of such spatial information into a GIS environment (see Table 5) has allowed visualizing the fishing pressure exerted by the "artes menores" vessels along the limit of three miles in front of the coast of Asturias. As it can be observed (Figure 9), fishing grounds in the west coast (between Gijón and Viavélez) experiment the highest influence of close fishing ports. Concretely, the coast strip between Cabo Peñas and Cabo Vidio is the area with a highest artisanal fishing pressure; both in terms of number of vessels operating in such area and in terms of accumulated gross tons and engine power.

3.4 "Metiers" analysis"

One of the most important contributions of the socioeconomic survey has been the identification, classification and characterization of the "metiers" utilized by the artisanal fleet. A "metier" is defined as: *a group of fishing operations targeting a similar (assemblage of) species, using similar gear, during the same period of the year and/or the same area and which are characterised by a similar exploitation pattern.* Therefore, the concept of "metier" is closely linked to the fishing activities, traditions and gears employed by the artisanal fishermen.



Source: Own elaboration.

Figure 9. Number of boats, accumulated engine power (kW) and gross tons (GT) of the artisanal fleet by fishing area.

Firstly, it is important to point out that the information gathered through the survey has allowed the confirmation of the high variety and richness of "metiers" employed by the artisanal fleet in Asturias. The "metiers" classification has been carried out in accordance with both the categories set up by the EU and the established by the regional fishing authorities. In total 21 "metiers" have been identified

(Table 6), 15 of which are still exercised nowadays and other 7 that are in disuse or are barely employed. Another important goal has been the establishment of a higher level of "metiers" desegregation than the one implicit by the regional administrative fishing license modalities. In this sense, three new "metiers" no differentiated currently have been identified: lobster's trap, crayfish's trammel net and conger's small long-line.

Table 6. "Metiers" employed by the artisanal fleet in Asturias, correspondent regional fishing licenses and main objective species.

Fishing license	Metiers	Objective specie(s)
Octopus Trap	Octopus Trap	Octopus/Shrimp
Shellfish Trap	Shellfish Trap	Shellfish
	Lobster Trap	Lobster
"Butrón"	"Butrón"	Eel
Set gillnet ("Miño")	"Miño"	Various (fish and shellfish)
Red-mullet Set gillnet ("Beta salmonetera")	Red-mullet Set gillnet ("Beta salmonetera")	Red mullet
Hake Set gillnet ("Beta")	Hake Set gillnet ("Beta")	Hake / Red mullet
Trammel net	Trammel net	Red mullet
	Crayfish Trammel net(1)	Crayfish
Horse mackerel Purse seine	Horse mackerel Purse seine	Horse mackerel
Shellfish gillnet ("Volanta")	Shellfish gillnet ("Volanta")	Shellfish
"Abareque"	"Abareque"	Sardine
Small longline	Hake small longline	Hake/Various
	Conger small longline	Conger
Sea bass small longline	Sea bass small longline	Sea bass
Rod-Hook	Rod-Hook	Hake
Mackerel Hand line	Mackerel Hand line	Mackerel
Squid	Squid	Squid
Sea weed	Sea weed recollection	Ocle
Young eel	Young eel	Young eel
Mirror	Mirror	Shellfish
-	Trolling lines	Tuna

(1) "Metier" identified through the surveys but with a residual utilization

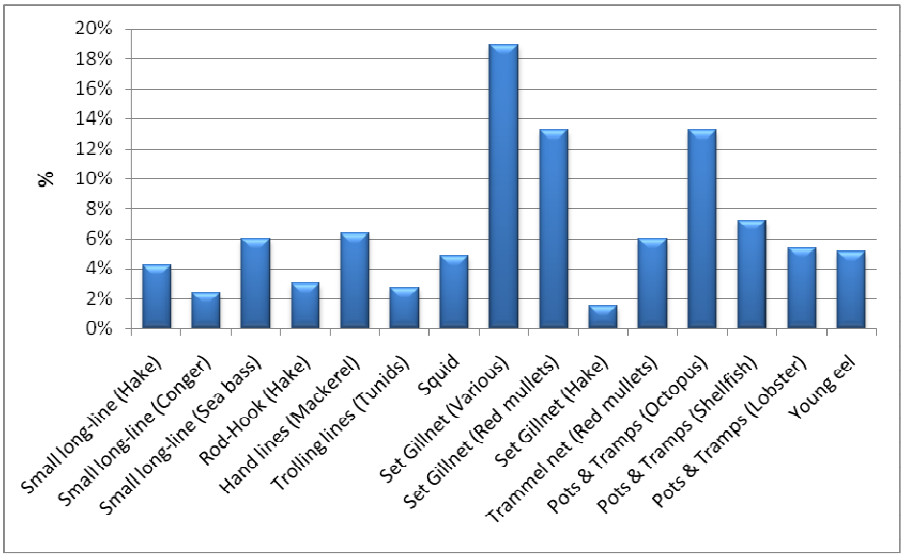
Source: Own elaboration

Colours' legend	
	Metiers which are in disuse or that are barely employed
	Other identified "metiers" that do not correspond with any regional fishing license

Source: Own elaboration

On the other hand, it is also necessary to take into account the goose barnacle recollection as an important complementary fishing activity for artisanal fishermen in the mid and west coast of Asturias, especially during winter time when other fishing possibilities are scarce. Even though the goose barnacle recollection cannot be considered a "metier" as it is not carried out from a boat, normally all the crewmembers have the correspondent personal license and during its recollection all crewmembers participate distributing among them the correspondent incomes.

Analyzing the "metiers" utilization rate (Figure 10) it can be concluded that net gears are the gears most frequently employed by the artisanal fleet, followed by hooks and traps. These results are in line with those obtained in the economic analysis that shows that the net gears are the most profitable fishing gear for the artisanal fleet.



Source: Own elaboration.

Figure 10. Percentage of "metiers" utilization by the artisanal fleet surveyed.

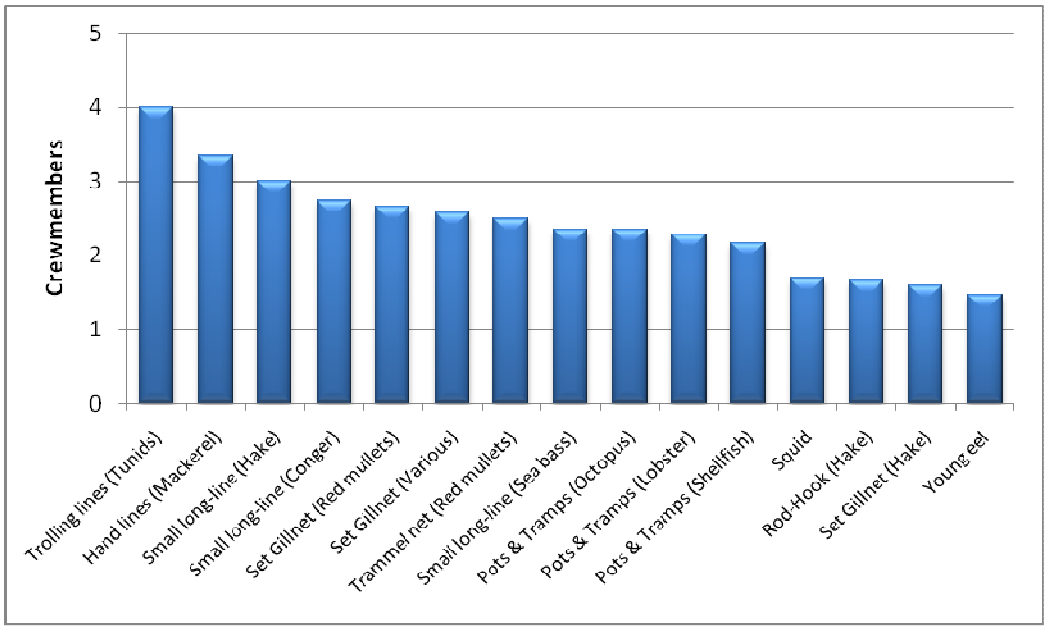
Another interesting result observed is the high degree of alternation of artisanal vessels between different "metiers" during a fishing season (Table 7), confirming the multi-specific and multi-gear character of the artisanal fleet from Asturias.

Finally, the relation between the different "metiers" and associated technical and workforce demands has been analyzed (Figure 11 and Figure 12). As a consequence, the average number of crewmembers per "metier" and the intervals of length, engine power and gross tones associated to each of the "metiers" identified have been determined.

Table 7. Degree of "metiers" alternation during one fishing season.

During a fishing season alternates:	% of fishing boats
2 different metiers	25%
3 different metiers	33.6%
4 different metiers	10.7%
5 ó 6 different metiers	10.7%
One metier through the whole year	20%
Alternates fishing gears from the same category	49%
Alternates fishing gears from 2 different categories	34%
Alternates fishing gears from 3 different categories	11%

Source: Own elaboration

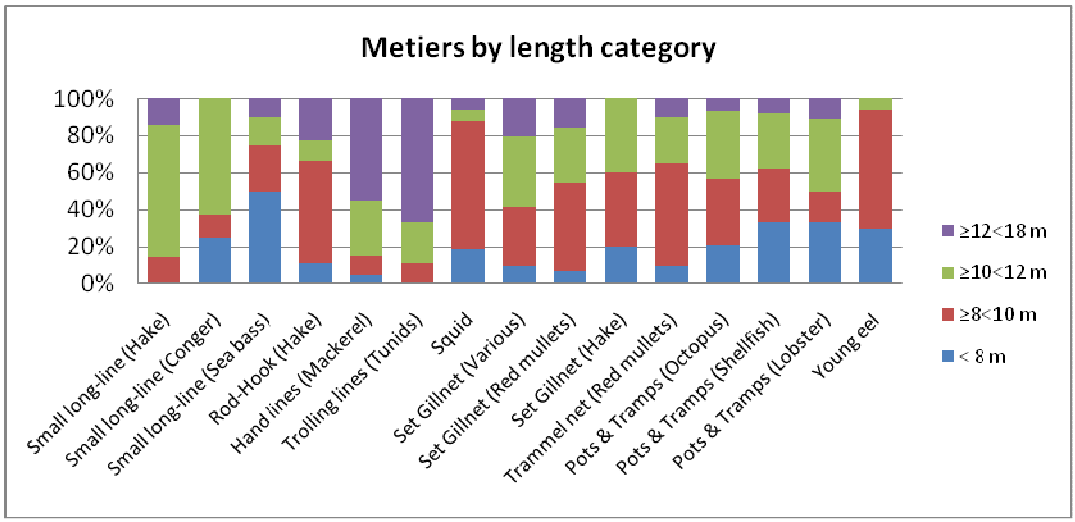


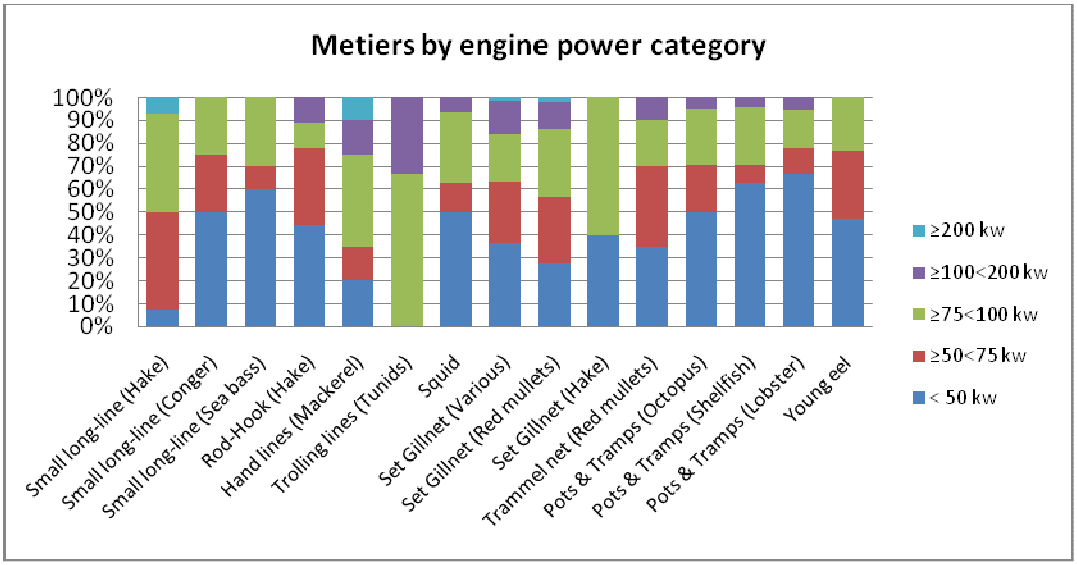
Source: Own elaboration.

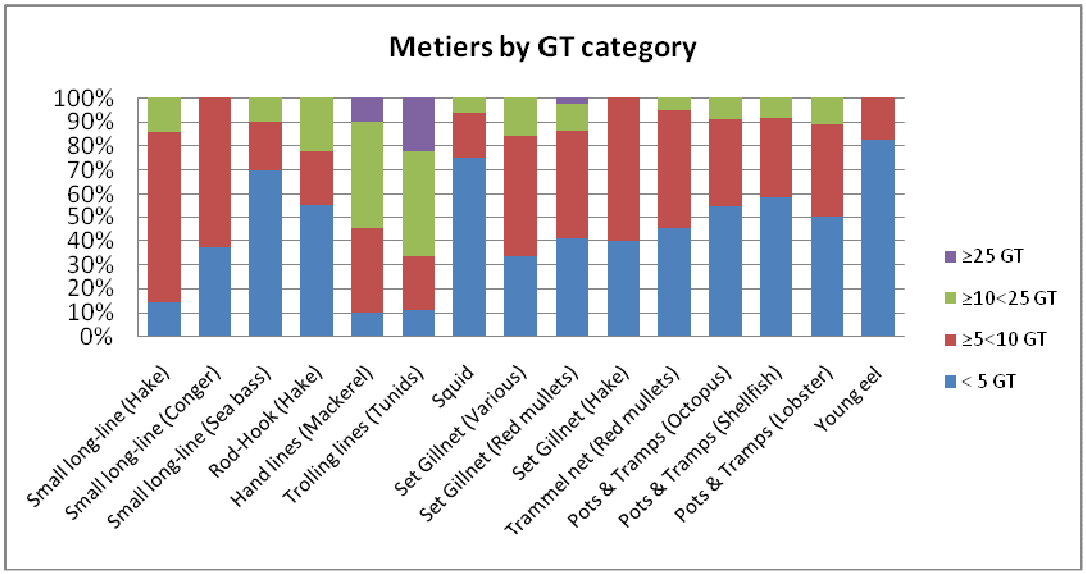
Figure 11. Average crewmembers per "metier".

3.5 Captures, incomes and profitability of the artisanal fleet

The analysis of the artisanal fleet incomes' evolution during the last years shows that both captures and consequent incomes from the "artes menores" fleet have increased, especially in 2008 and 2009. However, the number of operative vessels has decreased in a 9.6%, indicating that the artisanal boats have increased their average production and turnover over the last years (Figure 13). This production raise could be due to a stock increase of relevant species (hake, for example) or an enhancement of the efficiency levels motivated by the reduction of fishing overcapacity.

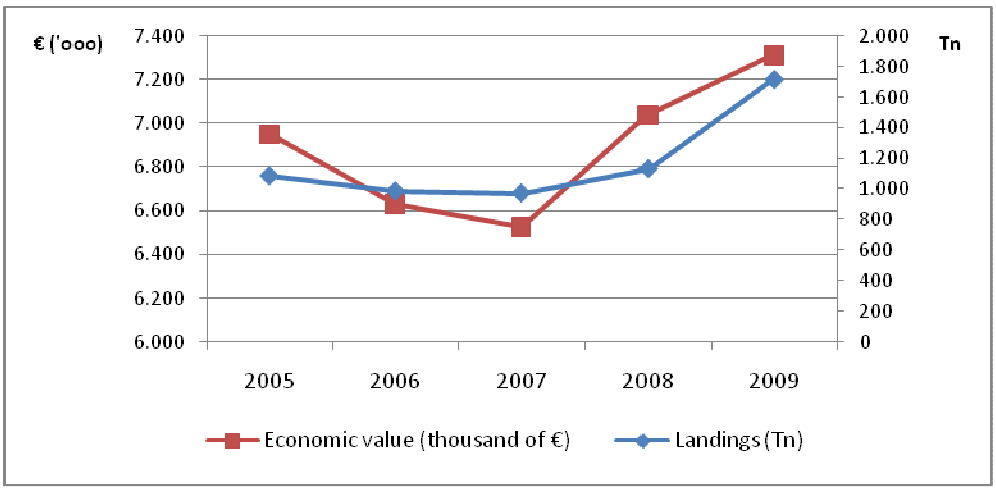






Source: Own elaboration

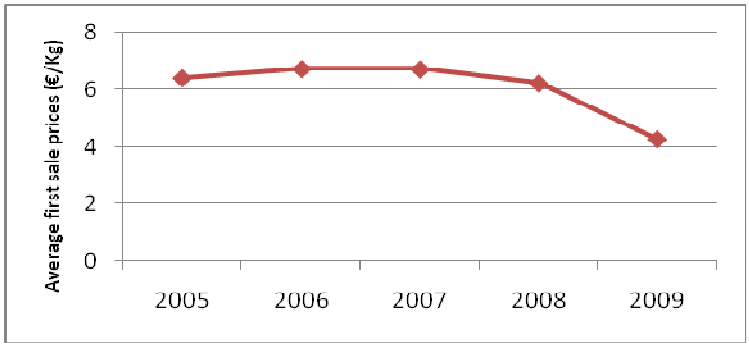
Figure 12. "Metier" distribution by length, engine power and gross tonnage categories.



Source: Own elaboration.

Figure 13. Landings and economic value of captures from artisanal fisheries in Asturias (2005-2009).

On the other hand, it is essential to point out that the weight of the landings has augmented more than their correspondent economic value (48.5% vs. 5.2%). Actually, the average first sale price have decreased in a 34% from 204 to 2009, going from 6.41 €/kg in 2005 to 4.25 €/kg in 2009 (Figure 14). This situation, in conjunction with the limited capability of the artisanal fleet to fix prices, could have pushed artisanal vessels to augment their fishing effort in order to compensate the decrease in incomes and the increase of associated exploitation costs.



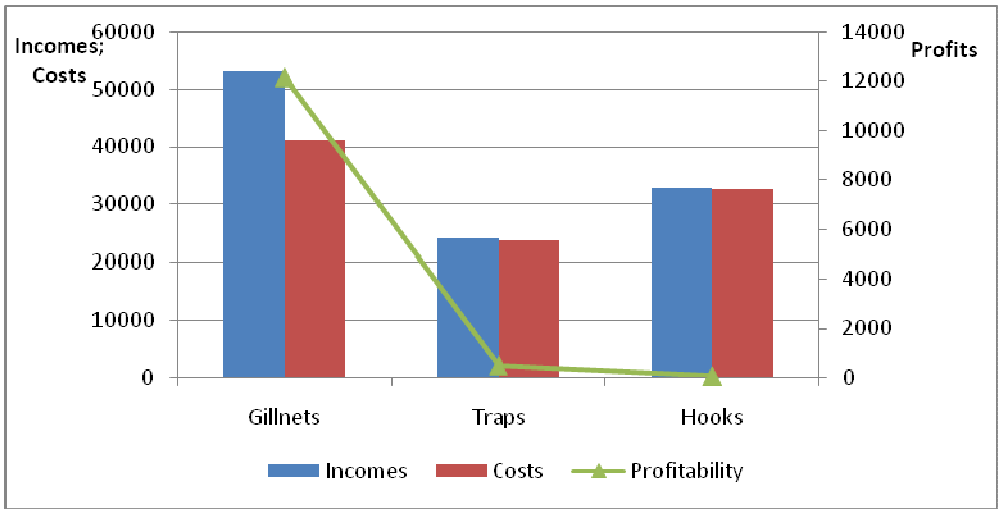
Source: Own elaboration.

Figure 14. Average first sale price of captures from artisanal fisheries in Asturias (2005-2009).

On the other hand, in terms of costs the data gathered shows that the artisanal fleet in Asturias has a highly adjusted costs' structure and, thus, policies aimed at reducing exploitation costs may have a limited effect on vessels profitability. In contrast, the main difficulties of the artisanal fleet are centered on the low income levels motivated by the decreasing first sale prices. This is what really induces a low profitability, which in turn acts as an entry barrier for the maintenance and renewal of the artisanal fleet as few economic agents would be willing to invest larger amounts of money in a

business with no return. As a consequence, from a management point of view, it is imperative to promote strategies and policies aiming to increase the incomes through either commercialization and first sale prices improvements or new diversification strategies. These policies not only are more effective in improving the profitability, they also encourage economic sustainability minimizing the dependency upon direct subsidies policies.

Once both incomes and costs have been analysed, the following step was to assess the profitability of the artisanal fleet. At this point it is important to highlight that during the interviewing process information regarding not-declared incomes was collected. This allowed analysing the "apparent" (taking into account just declared incomes) and "real" (taking into account both declared and not-declared incomes) profitability (see Figure 15 and Figure 16 respectively). The profitability analysis has been carried out by the three main categories of artisanal fishing gears (nets, traps and hooks):

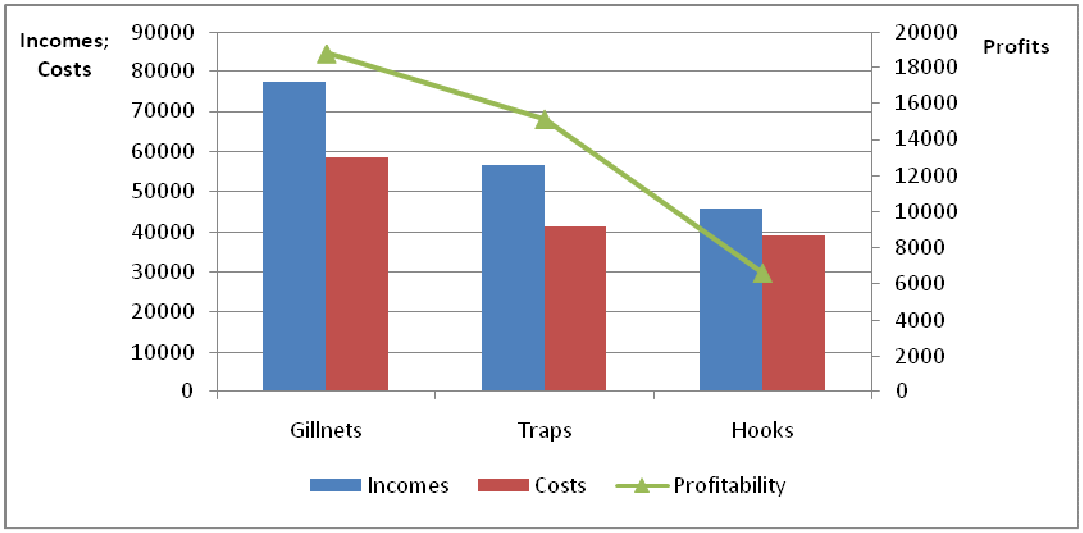


Source: Own elaboration.

Figure 15. Incomes, costs and estimated "apparent" profitability of the artisanal fleet in relation to three main categories of fishing gears (2008).

As it can be observed, profitability from those vessels that use gillnets gears during the fishing season is higher than those that use traps or hooks. In fact, the incomes generated by traps and hooks fisheries is not enough to pay for the financial and depreciation costs derived from the economic activity. However, if the analysis is carried out taking into account not-declared incomes ("real" profitability) the results change considerably. On average, and based on the available information, it has been estimated that the not-declared incomes represent the 45% of the total incomes generated by the artisanal fleet in Asturias. Actually, and despite of the caution with which these results have to be examined, only taking in consideration no declared incomes it is possible to achieve coherent and

realistic results from the economic analyses carried out. In terms of "real" profitability by category of fishing gear (Figure 16), the differences observed in Figure 15 are reduced dramatically. Gillnets are still the most profitable gears, followed by traps and, finally, hooks. It is important to note that estimated not-declared incomes for vessels fishing with traps represent more than 50% of their annual total incomes.



Source: Own elaboration.

Figure 16. Incomes, costs and estimated "real" profitability of the artisanal fleet in relation to three main categories of fishing gears (2008).

Nonetheless, even when the profitability estimation takes into consideration the no-declared incomes, the expected turnover from an artisanal vessel is still clearly lower than that from other economic sectors with a similar capital investment. In terms of average fishermen wages, the calculations vary considerable depending on whether the estimation takes into account no declared incomes or not (Table 8). In fact, only in the case of including such incomes in the analysis the estimation seems coherent and realistic: around 13 000 € per worker and year (still lower than the average yearly incomes of a worker from the construction or services sectors in Asturias in 2008).

3.6 Social dimension and fishermen perceptions

The information regarding the social dimension and the business structure of the artisanal fleet was the first to be exploited and analysed and, as a consequence, were presented during the first semester of 2010. The main conclusion was that the information gathered confirmed the traditional and family character of the artisanal fleet from Asturias. A resume of those results is presented below:

Table 8. Average yearly incomes per fishermen and fishing gear category.

	Nets	Traps	Hooks
Total crew members	83	17	38
Mean crew members	3	1.89	1.81
Average yearly incomes per worker (€)	7 207	5 065	7 323
Total crewmembers (vessels that facilitated information regarding no declared incomes)	29	8	11
Mean crewmembers (vessels that facilitated information regarding no declared incomes)	2.63	2	1.57
Average yearly incomes per worker (including no declared incomes) (€)	13 524	13 602	12 584

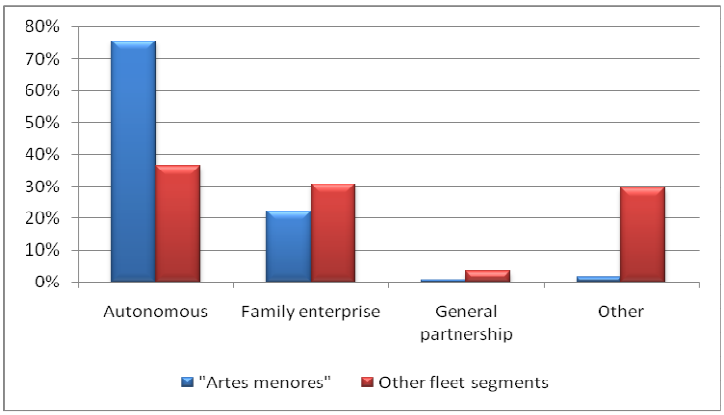
Source: Own elaboration

- A vast majority of ship-owners (95%) work on the vessels. Therefore, they have responsibilities as managers, workers, trader, etc. without being entirely aware of it;
- 95% of the crewmembers in the "artes menores" fleet come from coastal areas close to the fishing harbour. This facilitates the existence of strong bonds between the artisanal fleet and coastal communities where it develops its activities;
- In 40% of the vessels interviewed there were family ties between the crewmembers (Figure 17).

Moreover, the differentiating characteristics of the artisanal fleet respect industrial fisheries are reflected in the types of business entities and salaries distribution. Most of the "artes menores" fleet is conformed of autonomous workers (75%) or little family enterprises (22%); while a 100% of the vessels surveyed developed an income distribution salaries policy. In contrast, social aspects such as the high average age of the ship-owners and the lack of generational replacement perspectives set hurdles to the sustainability of the fleet in the mid/long term. Currently, over 40% of the ship-owners are on the 46 to 55 years interval, with another 9% with more than 56 years (Figure 18). Taking into account the early average of retirement within the fisheries' sector, the low expectations of generational replacement (just 16% of the interviewees, Figure 19) and the scarce profitability of artisanal fisheries, it is clear that there is a decreasing tendency in terms of the number of artisanal vessels in Asturias.

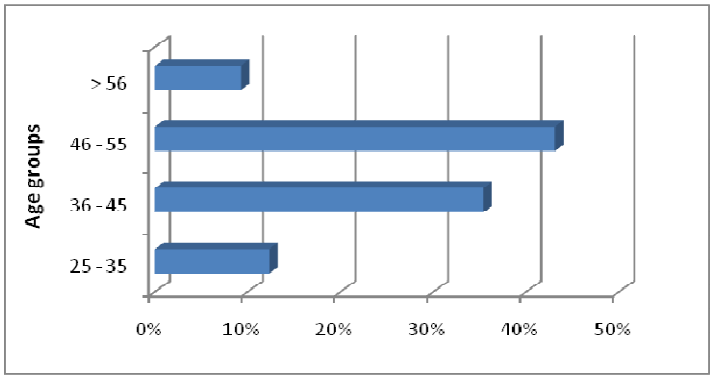
Finally, it is important to note that the perceptions of the interviewees regarding the current situation and future perspectives of the artisanal fishing sector in Asturias match up with the results and conclusions obtained throughout the previous analyses. For example, the sector also perceives that the low level of prices is the main problem currently faced by the artisanal fleet and it jeopardises the economic viability of the activity (Figure 20). They also highlighted the lack of generational

replacement perspectives as one of the main problems to achieve the desired long-term sustainability of the fleet. However, according to the sector's opinion, this problem is aggravated by the excessive formative exigencies and administrative constraints to recruit new and young fishermen.



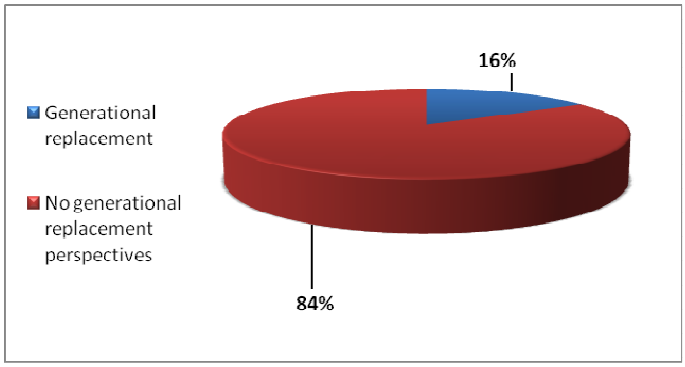
Source: Own elaboration.

Figure 17. Type of business entities of the "artes menores" fleet and its comparison with other fleet segments.



Source: Own elaboration.

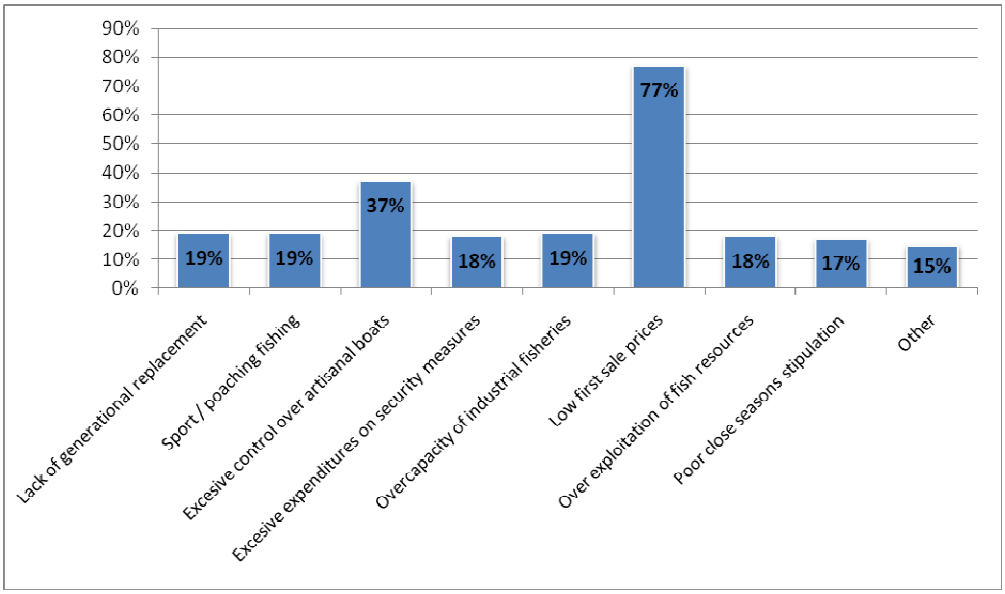
Figure 18. Distribution of the ship-owners by age intervals (%).



Source: Own elaboration.

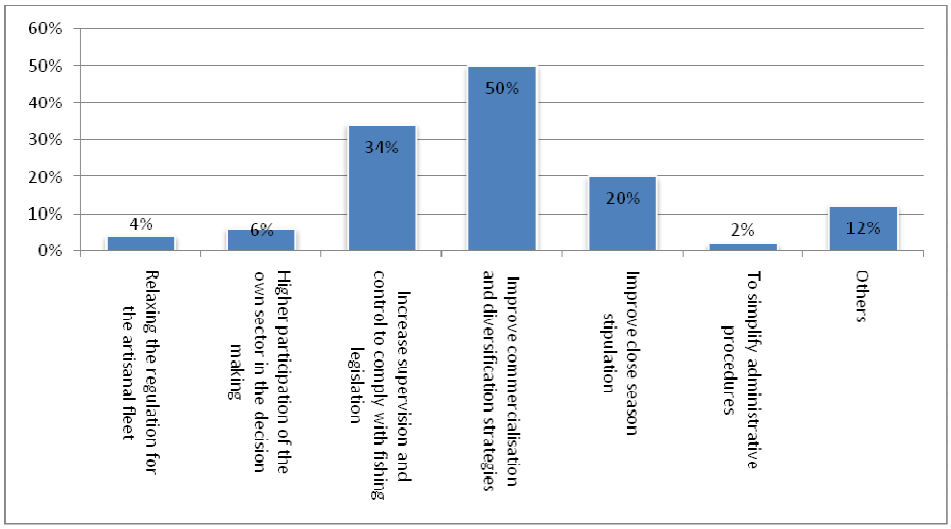
Figure 19. Generational replacement perspectives within the artisanal fleet from Asturias (%).

In terms of the solutions suggested by the interviewees (Figure 21), it is significant that over 50% of the responses highlighted the necessity of adopting policies and measures aimed to increase first sale prices and to help in the economic diversification of the artisanal fisheries. Although the own sector has put in place some measures aimed to respond to these demands, the interviews with the presidents of the fishermen associations revealed that the sector lacks the knowledge, know-how and resources necessaries to develop such initiatives. As a result, in order to facilitate the development of such initiatives it is important that the fishing authorities help in promotion and support of this type of measures.



Source: Own elaboration.

Figure 20. Frequency of responses to the identified problems.



Source: Own elaboration

Figure 21. Frequency of potential measures proposed by the interviewees.

4. Final recommendations for a better knowledge and management of artisanal fisheries in Asturias

The information gathered through the surveying process and the analysis and results presented above allow the development of a number of final recommendations aimed to advance towards a more efficient and sustainable management of artisanal fisheries in Asturias. Such recommendations could be bring together into the following central themes:

1. The improvement of the information and knowledge about artisanal fisheries with the objective of progressing in the design and implementation of specific policies focused on artisanal fisheries;
2. The search of new proceedings aimed at increasing the incomes or the artisanal fleet at the same time that enhancing fishing resources conservation;
3. To facilitate the participation of the fishing sector in the decision-making process in a way where the own sector is co-responsible for the conservation and sustainability of fishing resources;
4. To direct institutional and administrative support towards policies aimed at improving the diversification and commercial optimization of the artisanal fisheries.

Particularly, it would be recommendable to:

- Carry on with the initiatives and projects aimed at completing and improving available information about artisanal fisheries. Concretely, it is essential to improve information collection regarding:
    - Days of activity of artisanal vessels. This would allow having the means to estimate real fishing effort and other relevant indicators for an efficient fisheries management (CPUE, etc);
    - Artisanal fisheries' fishing grounds. This information, in conjunction with data about fishing effort, would facilitate an analysis of fishing effort per fishing area, contributing to the management of highly sensitive or overexploited areas.
- To agree at a European level the group of indicators that would allow a coherent and consistent segmentation of the artisanal fleet, facilitating the development and application of specific measures directed towards artisanal fisheries;

- To exert a greater control over the labeling and traceability procedures, enhancing the valorization of fishing resources;
- To help, support and collaborate with fishermen organizations in those initiatives aimed at improving commercialization strategies;
- Take advantage of the European policies and strategies in relation with sustainability, maritime policy and integrated coastal zone management in order to promote the economic diversification of the artisanal fishing. It is essential to highlight that the artisanal fishermen is the most suitable collective to contribute to such diversification given its proximity to the coast, its strong bonds with the coastal communities and the artisanal and sustainable character of its activities.

On the other hand, through the analyses carried out throughout this document a number of strengths and opportunities for the artisanal sector in Asturias have been identified. The following table shows potential measures and actions that may be put in place in order to tale fully advantage of such strengths and opportunities:

Table 9. Measures aimed at taking advantage of artisanal sector's strengths and opportunities.

Strengths and opportunities for the artisanal fleet from Asturias	Recommendations to fully exploit the correspondent strengths and opportunities
The high quality of the exploited resources and their high market value *The low level of capitalization and its flexibility to adapt to new fishing strategies* *An adaptable costs structure which allows mitigating the impact of increases on exploitation costs (fuel).* *Its potential to take advantage of the new diversification opportunities derived from current European strategies and policies in relation with maritime policy and coastal zone management.* *Its rich human capital and traditional knowledge about fishing resources in Asturias*	• New commercialization strategies. • Campaigns and promotions aimed at differentiating artisanal products. • Development of pilot initiatives experimenting with more selective gears. • Implementation of new collaboration strategies between the fishing sector, research institutes and fishing authorities. • Development of exploitation experimental programs and illustrative projects based on good practices and co-responsibility. • To facilitate professional training for the development and implementation of fishing complementary activities. • To encourage and support new entrepreneurs in diversification activities. • Development of pilot co-management initiatives of fishing resources at a local level. • To encourage and support the incorporation of Young people to the fishing sector.

Source: Own elaboration

References

Documents

Centro de Experimentación Pesquera (CEP), Servicios de Gestión Medioambiental SIGMA S.L. "Estudio preliminar de la pesca artesanal con artes de red en el Principado de Asturias: Selectividad y Descartes", 2010. Proyecto desarrollado en el marco de la actividad 2 del proyecto europeo PRESPO.

Freire, J., García-Allut, A., 2000. Socioeconomic and biological causes of management failures in European artisanal fisheries: the case of Galicia (NW Spain). *Marine Policy*, 24: 375-384.

FAO, 1995. Código de Conducta para la Pesca Responsable. Roma.

FAO, 2005. Increasing the contribution of small-scale fisheries to poverty alleviation and food security. FAO Technical Guides for Responsible Fisheries 10. Rome, FAO.

FAO, 2009. The state of world fisheries and aquaculture, 2008. FAO Fisheries and Aquaculture department. Rome.

Florido del Corral, D., 2008. Focusing on artisanal fleets on a new scenario: The case of Andalusia (Spain). *Marine Policy*, 32: 1004-1012.

Forst, H., Andersen, P., 2006. The Common Fisheries Policy of the European Union and fisheries economics. *Marine Policy*, 30: 737-746.

García del Hoyo, J. J., García Ordáz, F., González Galán, M. D., Vilchez Lobato, M. L., 2001. Políticas de Gestión de Pesquerías Artesanales. Huelva: Servicio de Publicaciones Universidad de Huelva, 340 pp.

García del Hoyo, J. J., Pereira, J. A. (ed. Lit.), 2007. Observatorio científico de las pesquerías artesanales – SocioEconomía. 1ª Edición. Huelva: Servicio de Publicaciones Universidad de Huelva, 542 pp., ISBN: 978-84-96826-08-3.

Jentoft, S., 2004. Institutions in fisheries: what they are, what they do, and how they change. *Marine Policy*, 38: 137-149.

Kirkley, J., Morrison Paul, C., Squires, D., 2002. Capacity and Capacity Utilisation in Common-pool Resource Industries. *Environmental and Resource Economics*, 22: 71-97.

Kirkley, J., Squires. D., 1999. Capacity and Capacity Utilization in Fishing Industries. Discussion Paper 99-16, Department of Economics, University of California, San Diego, 38 pp.

Luna Sontorrío, L., (Dir.), 2006. Viabilidad de la flota de palangre del Principado de Asturias con un sistema individual de gestión de cuotas de pesca y valoración económica de las alternativas para su

reestructuración. Grupo de Investigación en Gestión Económica para el Desarrollo Sostenible del Sector Primario – Área de Pesca. Ed. Consejería de Medio Rural y Pesca, Gobierno del Principado de Asturias, 132 pp.

Ministerio de Agricultura, Pesca y Alimentación (MAPA), 2006. Estudio del impacto socioeconómico de la pesca recreativa en el Mediterráneo español. MAPA, Secretaría General de Pesca Marítima.

Ministerio de Agricultura, Pesca y Alimentación (MAPA), 2007. El Libro Blanco de la Pesca. Madrid, MAPA.

Ministerio de Agricultura, Pesca y Alimentación (MAPA), 2007. Plan Estratégico Nacional del Fondo Europeo de Pesca. Madrid, MAPA.

PRESPO, 2009. Contribuciones del Proyecto PRESPO al Libro Verde.

Surís Regueiro, J., Garza Gil, M. D., 2004. Los segmentos de flota pesquera en la Unión Europea. Una propuesta para el cálculo de las rentabilidades medias. *Estudios Agrosociales y Pesqueros*, 204: 155-178.

Tingley, D., Pascoe, S., Mardle, S., 2003. Estimating capacity utilization in multi-purpose, multi-métier fisheries. *Fisheries Research*, 63: 121-134.

Unión Europea, 2009. El Libro Verde para la Reforma de la Política Pesquera Común. Comunicación de la Comisión Europea (COM(2009) 163 final).

Vestergaard, N., 2004. Fishing Capacity in Europe: Special Issue Introduction. *Marine Resource Economics*, 20: 323-326.

Legislation

España. Ley 3/2001, de 26 de marzo, de Pesca Marítima del Estado. *Boletín Oficial del Estado*, 28 de marzo del 2001, nº 75.

España. RD 410/2001, de 20 de abril, por el que se regula la pesca con artes fijos en el Caladero Nacional del Cantábrico y Noroeste. *Boletín Oficial del Estado*, 21 de abril del 2001, nº 96.

España. RD 2064/2004, de 15 de octubre, por el que se regula la primera venta de los productos pesqueros. *Boletín Oficial del Estado*, 29 de octubre del 2004, nº 261.

España. RD 1615/2005, de 30 de diciembre, por el que se modifica el Real Decreto 560/1995, de 7 de abril, por el que se establecen las tallas mínimas de determinadas especies pesqueras. *Boletín Oficial del Estado*, 19 de enero del 2006, nº 16.

Principado de Asturias. Ley 2/93, de 29 de octubre, de pesca marítima en aguas interiores y aprovechamiento de recursos marinos. *Boletín Oficial del Principado de Asturias*, 15 de noviembre del 1993, nº 264.

Principado de Asturias. Resolución de 13 de marzo de 1997 por la que se regulan las tallas, pesos mínimos de captura y épocas de veda. *Boletín Oficial del Principado de Asturias*, 5 de abril de 1997.

Principado de Asturias. Ley 15/2002 de Medidas presupuestarias, Administrativas y Fiscales. *Boletín Oficial del Principado de Asturias*, 31 de diciembre del 2002.

Principado de Asturias. Resolución de 10 de marzo de 2004, de la Consejería de Medio Rural y Pesca, por la que se aprueba el Plan de Explotación del Marisqueo. *Boletín Oficial del Principado de Asturias*, 12 de marzo del 2004.

Principado de Asturias. Resolución de 18 de noviembre de 2008, de la Consejería de Medio Ambiente y Desarrollo Rural, por la que se regula la pesca del pulpo común (Octopus vulgaris) durante la campaña 2008/2009. *Boletín Oficial del Principado de Asturias*, 12 de diciembre del 2008, nº 287.

Principado de Asturias. Resolución de 4 de septiembre de 2009, de la consejería de Medio Rural y Pesca, por la que se regula la campaña 2009/2010 de extracción del percebe y se aprueban los planes de explotación. *Boletín Oficial del Principado de Asturias*, 16 de septiembre del 2009, nº 215.

Principado de Asturias. Resolución de 17 de noviembre de 2009, de la consejería de Medio Rural y Pesca, por la que se regula la pesca del pulpo común (octopus vulgaris) durante la campaña 2009/2010. *Boletín Oficial del Principado de Asturias*, 4 de diciembre del 2009, nº 281.

Principado de Asturias. Resolución de 15 de diciembre de 2009, de la consejería de Medio Rural y Pesca, por la que se aprueban las bases reguladoras de las ayudas públicas al sector pesquero del Principado de Asturias dirigidas a la adaptación de la flota pesquera. *Boletín Oficial del Principado de Asturias*, 19 de diciembre del 2009, nº 292.

Unión Europea. Reglamento (CE) No 1543/2000 del Consejo de 29 de junio de 2000 por el que se establece un marco comunitario de recopilación y gestión de los datos necesarios para el funcionamiento de la política pesquera común. *Diario Oficial de la Unión Europea*, 15 de julio del 2000, L176/1.

Unión Europea. Reglamento (CE) No 1639/2001 de la Comisión de 25 de julio de 2001 por el que se establecen el programa comunitario mínimo y el programa comunitario amplio de recopilación de datos sobre el sector pesquero y se aprueban las disposiciones de aplicación del Reglamento (CE) no 1543/2000 del Consejo. *Diario Oficial de las Comunidades Europeas*, 17 de agosto del 2001, L222/53.

Unión Europea. Reglamento (CE) No 2369/2002 del Consejo de 20 de diciembre de 2002 que modifica el Reglamento (CE) no 2792/1999, por el que se definen las modalidades y condiciones de las intervenciones comunitarias con finalidad estructural en el sector de la pesca. *Diario Oficial de la Unión Europea*, 31 de diciembre del 2002, L358/49.

Unión Europea. Reglamento (CE) No 2371/2002 del Consejo de 20 de diciembre de 2002 sobre la conservación y la explotación sostenible de los recursos pesqueros en virtud de la política pesquera común. *Diario Oficial de la Unión Europea*, 31 de diciembre del 2002, L358/59.

Unión Europea. Proposición para una regulación del Consejo (COM (2004) 497 final). 12 de septiembre del 2004.

Unión Europea. Reglamento (CE) No 2166/2005 del Consejo de 20 de diciembre de 2005 por el que se establecen medidas para la recuperación de la población sur de merluza europea y de cigalas en el mar Cantábrico y en el oeste de la Península Ibérica. *Diario Oficial de la Unión Europea*, 28 de diciembre del 2005, L345/5.

Unión Europea. Reglamento (CE) No 861/2006 del Consejo de 22 de mayo de 2006. *Diario Oficial de la Unión Europea*, 14 de junio del 2006, L160/1.

Unión Europea. Reglamento (CE) No 1198/2006 del Consejo de 27 de julio de 2006 relativo al Fondo Europeo de Pesca. *Diario Oficial de la Unión Europea*, 15 de agosto del 2006, L223/1.

Unión Europea. Comunicación de la Comisión, Una Política Marítima Integrada para la Unión Europea (COM (2007) 575 final). 10 de octubre del 2007.

Unión Europea. Reglamento (CE) No 199/2008 del Consejo de 25 de febrero de 2008. *Diario Oficial de la Unión Europea*, 5 de marzo del 2008, L60/1.

Unión Europea Reglamento (UE) No 23/2010 del Consejo de 14 de enero de 2010. *Diario Oficial de la Unión Europea*, 26 de enero del 2010, L21/1.

Appendix. Questionnaires used during the face-to-face-interviews

Questionnaire for artisanal ship-owners

Indurot

GOBIERNO DEL PRINCIPADO DE ASTURIAS
CONSEJERÍA DE MEDIO RURAL Y PESCA

PRESPO

ENCUESTA SOBRE LA SITUACIÓN SOCIO-ECONÓMICA DE LAS PESQUERÍAS ARTESANALES EN ASTURIAS - ARMADORES



A RELLENAR POR EL ENTREVISTADOR:

Código de calidad.....

Código de entrevista..... Entrevistador.....

INFORMACIÓN GENERAL

Nombre.....

Edad..... *Nivel de estudios*.....

Puerto base al que pertenece.....

Características de la embarcación:

Nombre de la embarcación.....

Antigüedad de la embarcación..... *Eslora total*.....

Arqueo (GT)..... *Potencia declarada (Kw)*.....

Potencia real.....

RECURSOS BIOLÓGICOS Y ESFUERZO PESQUERO

1.-Modalidad de pesca en la que está inscrita la embarcación en el censo nacional.....

2.-Media anual de **días parado / varado** (cuantos días al año permanece la embarcación parada por motivos de reparaciones, varado obligatorio, mal tiempo, etc. SIN INCLUIR FINES DE SEMANA)

.....días de media parado

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

GOBIERNO DEL PRINCIPADO DE ASTURIAS
CONSEJERÍA DE MEDIO RURAL Y PESCA

3.- Por favor, indique de forma breve qué **técnicas, aparejos o artes de pesca utiliza** a lo largo del año, así como **la época aproximada del año** y **las principales especies objetivo** capturadas con cada una de ellas:

Técnica o aparejo de pesca	**Temporada en que se utiliza** (de forma general, por ejemplo: entre noviembre y diciembre)	**Principales especies objetivo**	**¿Qué porcentaje del total desembarcado se captura con dicho aparejo?**	**¿El aparejo se levanta diariamente? En caso contrario indicar tiempo en el mar.**

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

Gobierno del Principado de Asturias
Consejería de Medio Rural y Pesca

4.- De forma general, ¿podría indicarme los **en qué zonas desarrolla su actividad pesquera**? (puede ser más fácil indicar zonas de pesca en el mapa de caladeros. Explicitar distancia a la costa y diferencias según temporadas o técnicas de pesca utilizadas)

Observaciones.....

.....

.....

.....

.....

5.- Basándose en su experiencia personal, ¿**podría describir** lo más detalladamente posible **los principales cambios que se han producido en los recursos pesqueros que usted pesca habitualmente**?

Nos interesa conocer de primera mano si a lo largo de los últimos años ha percibido cambios en los recursos pesqueros de su zona habitual de pesca: si ciertas especies han disminuido / incrementado; si ha notado cambios en la localización geográfica de los stocks de peces o cambios en la temporada de año en que capturan ciertas especies

Pasar a la hoja siguiente:

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

Indurot

GOBIERNO DEL PRINCIPADO DE ASTURIAS
CONSEJERÍA DE MEDIO RURAL Y PESCA

PRESPO

Especie	Cambios en stock (reducción/ incremento stock o peso medio de las capturas)	Cambios en la localización (situación geográfica de los stocks)	Cambios temporales (ciertas especies aparecen antes, más tarde, etc.)	¿Desde cuándo se percibe dichos cambios? (últimos 5 años, últimos 10, etc.)	¿Cuáles cree que han sido las causas que han motivado estos cambios?

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

Indurot

GOBIERNO DEL PRINCIPADO DE ASTURIAS
CONSEJERÍA DE MEDIO RURAL Y PESCA

PRESPO

INFORMACIÓN SOCIO-ECONÓMICA

6- Respecto a la **tripulación de la embarcación**,

¿Es usted propietario de la embarcación?: Si ☐ No ☐ ¿Trabaja en la embarcación?: Si ☐ No ☐

Número de tripulantes: Tripulantes autónomos…… Tripulantes por cuenta ajena……

¿Alguno de los tripulantes trabaja solo a tiempo parcial?……..

¿Hay alguna mujer entre la tripulación?..... ¿Alguno proviene de fuera de España?.....

Alguno es familiar suyo: Si ☐ No ☐ Grado de parentesco……

¿Existe alguna persona en su familia que desee continuar con la actividad pesquera? (Perspectivas de relevo generacional).....

7.- En relación al **régimen de propiedad** de la empresa,

- Es usted el único propietario ☐ Son varios copropietarios ☐ ¿Cuantos copropietarios?…….
- El tipo de empresa (régimen jurídico) es:

Persona Física ☐ Comunidad de bienes ☐ Sociedad civil ☐
Armadores asimilados a cuenta ajena ☐ Otro ☐ Especificar……..

8.- ¿Cómo se **organizan para llevar las cuentas** y gestionar la empresa?

No llevan cuentas ☐ Se encarga usted personalmente ☐ Se encarga otro copropietario ☐
Las lleva una asesoría / gestoría ☐ Otro ☐ Especificar……
Algunas cosas las lleva una gestoría y otras usted (u otro copropietario) ☐

9.- ¿Cómo se lleva a cabo **el sistema de retribución y reparto de beneficios**?

Los ingresos brutos por la venta de capturas se reparten entre armador y tripulación ("a la parte") ☐

Explicar cómo se distribuyen los beneficios……

……

……

……

La tripulación por cuenta ajena percibe un salario fijo e independiente de las capturas ☐

Sistema de retribución mixta: salario fijo más comisiones variables en función de las capturas ☐

En tal caso, ¿cómo funcionan las comisiones?.....

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

Gobierno del Principado de Asturias
Consejería de Medio Rural y Pesca

10.- ¿Podría **indicar que ingresos aproximados obtuvo por la venta de pescado durante el 2008?**

Indicar de forma aproximada los ingresos medios anuales provenientes de ventas de pescado no declaradas / fuera de lonja.

¡ESTA INFORMACIÓN ES CONFIDENCIAL Y NO VA SER DIFUNDIDA A NINGÚN ORGANISMO!
Tan solo queremos hacernos una idea de las ventas reales de pescado

Importe de ventas de pescado facturadas en lonja (€) en el 2008	Importe medio aproximado de las ventas no declaradas

11.- ¿Ha recibido algún tipo de **subvención de organismos públicos** para la adquisición o modernización de la embarcación?

Año	Cuantía	Concepto	% Subvencionado sobre el coste total	Organismo Responsable

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

Indurot

GOBIERNO DEL PRINCIPADO DE ASTURIAS
CONSEJERÍA DE MEDIO RURAL Y PESCA

PRESPO

12.- Intente hacer un repaso a las **principales fuentes de gastos** de la embarcación durante el año 2008

CONCEPTO		Importe en €	Observaciones
Costes anuales de producción	S. Social tripulación		
	Combustible		
	Carnada		
	Reparaciones y mantenimiento de aparejos		
	Adquisición de instrumental / medidas seguridad		
	Seguros de la embarcación		
	Licencias / Revisiones		
	Otros gastos de funcionamiento (Indicar cuáles)		

13.- ¿Está actualmente **pagando la devolución de algún préstamo relacionado con la embarcación**?

Si ☐ No ☐

Cantidad inicial del préstamo		**Cantidad que queda por pagar**	

Motivo del préstamo.....

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

14.- ¿Cuál fue **el importe de la embarcación en el momento de comprarla?**

..... Euros ☐ Pesetas ☐

15.- **Si en este momento vendiese la embarcación** con todos los aparejos e instrumentos de navegación, **¿Por cuánto dinero estaría dispuesto a venderla?**

..... Euros

PROBLEMÁTICA DEL SECTOR Y SOLUCIONES DE GESTIÓN

13.- ¿Cuáles considera qué son los **principales problemas / retos a los que se enfrenta el sector pesquero artesanal en Asturias?**

.....

.....

.....

.....

.....

.....

.....

14.- ¿Qué **medidas** cree que podría poner en marcha la administración para **mejorar la situación actual del sector pesquero artesanal** y solventar dichos problemas?

.....

.....

.....

.....

.....

.....

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

Questionnaire for presidents of "Cofradías"

Indurot

GOBIERNO DEL PRINCIPADO DE ASTURIAS
CONSEJERÍA DE MEDIO RURAL Y PESCA

PRESPO

ENCUESTA SOBRE LA SITUACIÓN SOCIO-ECONÓMICA DE LAS PESQUERÍAS ARTESANALES EN ASTURIAS



A RELLENAR POR EL ENTREVISTADOR:

Código de calidad.....

Código de entrevista..... Entrevistador.....

INFORMACIÓN GENERAL

Nombre.....

Edad..... *Nivel de estudios*.....

Puerto base al que pertenece.....

Características de la embarcación:

Nombre de la embarcación.....

Antigüedad de la embarcación..... *Eslora total*.....

Arqueo (GT)..... *Potencia declarada (Kw)*.....

Potencia real.....

RECURSOS BIOLÓGICOS Y ESFUERZO PESQUERO

1.-Modalidad de pesca en la que está inscrita la embarcación en el censo nacional.....

2.-Media anual de **días parado / varado** (cuantos días al año permanece la embarcación parada por motivos de reparaciones, varado obligatorio, mal tiempo, etc. SIN INCLUIR FINES DE SEMANA)

.....días de media parado

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

GOBIERNO DEL PRINCIPADO DE ASTURIAS
CONSEJERÍA DE MEDIO RURAL Y PESCA

3.- Por favor, indique de forma breve qué **técnicas, aparejos o artes de pesca utiliza** a lo largo del año, así como **la época aproximada del año** y **las principales especies objetivo** capturadas con cada una de ellas:

Técnica o aparejo de pesca	**Temporada en que se utiliza** (de forma general, por ejemplo: entre noviembre y diciembre)	**Principales especies objetivo**	**¿Qué porcentaje del total desembarcado se captura con dicho aparejo?**	**¿El aparejo se levanta diariamente? En caso contrario indicar tiempo en el mar.**

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

Indurot

GOBIERNO DEL PRINCIPADO DE ASTURIAS
CONSEJERÍA DE MEDIO RURAL Y PESCA

PRESPO

4.- De forma general, ¿podría indicarme los **en qué zonas desarrolla su actividad pesquera**? (puede ser más fácil indicar zonas de pesca en el mapa de caladeros. Explicitar distancia a la costa y diferencias según temporadas o técnicas de pesca utilizadas)

Observaciones.....
.....
.....
.....
.....

5.- Basándose en su experiencia personal, ¿**podría describir** lo más detalladamente posible **los principales cambios que se han producido en los recursos pesqueros que usted pesca habitualmente**?

Nos interesa conocer de primera mano si a lo largo de los últimos años ha percibido cambios en los recursos pesqueros de su zona habitual de pesca: si ciertas especies han disminuido / incrementado; si ha notado cambios en la localización geográfica de los stocks de peces o cambios en la temporada de año en que capturan ciertas especies

6.- De forma general, ¿cómo valora **las perspectivas de futuro de los recursos pesqueros**?

:

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

Gobierno del Principado de Asturias
Consejería de Medio Rural y Pesca

Especie	Cambios en stock (reducción/ incremento stock o peso medio de las capturas)	Cambios en la localización (situación geográfica de los stocks)	Cambios temporales (ciertas especies aparecen antes, más tarde, etc.)	¿Desde cuándo se percibe dichos cambios? (últimos 5 años, últimos 10, etc.)	¿Cuáles cree que han sido las causas que han motivado estos cambios?

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

Indurot

GOBIERNO DEL PRINCIPADO DE ASTURIAS
CONSEJERÍA DE MEDIO RURAL Y PESCA

PRESPO

INFORMACIÓN SOCIO-ECONÓMICA

7- Respecto a la **tripulación de la embarcación**,

Es usted propietario de la embarcación: Si ☐ No ☐ Trabaja en la embarcación: Si ☐ No ☐

Número de tripulantes: Tripulantes autónomos…… Tripulantes por cuenta ajena……

¿Alguno trabaja a tiempo parcial?……..

¿Hay alguna mujer entre la tripulación?..... ¿Alguno proviene de fuera de España?.....

En tal caso, ¿cuál es el país o paises de origen?.....

Alguno es familiar suyo: Si ☐ No ☐ Grado de parentesco……

¿Existe alguna persona en su familia que desee continuar con la actividad pesquera? (Perspectivas de relevo generacional).....

8.- En relación al **régimen de propiedad** de la empresa,

- Es usted el único propietario ☐ Son varios copropietarios ☐ ¿Cuantos copropietarios?…….
- El tipo de empresa (régimen jurídico) es:

Persona Física ☐ Comunidad de bienes ☐ Sociedad civil ☐
Armadores asimilados a cuenta ajena ☐ Otro ☐ Especificar……..

9.- ¿Cómo se **organizan para llevar las cuentas** y gestionar la empresa?

No llevan cuentas ☐ Se encarga usted personalmente ☐ Se encarga otro copropietario ☐
Las lleva una asesoría / gestoría ☐ Otro ☐ Especificar……
Algunas cosas las lleva una gestoria y otras usted (u otro copropietario) ☐

Observaciones……
……
……
……
……

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

Indurot

GOBIERNO DEL PRINCIPADO DE ASTURIAS
CONSEJERÍA DE MEDIO RURAL Y PESCA

PRESPO

10.- ¿Cómo se lleva a cabo **el sistema de retribución y reparto de beneficios**?

Los ingresos brutos por la venta de capturas se reparten entre armador y tripulación ("a la parte") ☐

Explicar cómo se distribuyen los beneficios.....

.....

.....

La tripulación por cuenta ajena percibe un salario fijo e independiente de las capturas ☐

Sistema de retribución mixta: salario fijo más comisiones variables en función de las capturas ☐

En tal caso, ¿cómo funcionan las comisiones?.....

11.- ¿Podría **indicar que ingresos aproximados obtuvo por la venta de pescado durante el 2008**?

Indicar de forma aproximada los ingresos medios anuales provenientes de ventas de pescado no declaradas / fuera de lonja.

¡ESTA INFORMACIÓN ES CONFIDENCIAL Y NO VA SER DIFUNDIDA A NINGÚN ORGANISMO!
Tan solo queremos hacernos una idea de las ventas reales de pescado

Importe de ventas de pescado facturadas en lonja (€) en el 2008	Importe medio aproximado de las ventas no declaradas

Observaciones.....

.....

.....

- ¿Ha vendido parte de las capturas en una **lonja diferente a la del puerto base** de la embarcación? ¿Y en alguna lonja **fuera de Asturias**? (Indicar en qué lonjas y porcentaje/volumen aproximado subastado en cada una).....

.....

.....

.....

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

GOBIERNO DEL PRINCIPADO DE ASTURIAS
CONSEJERÍA DE MEDIO RURAL Y PESCA

12.- ¿Ha recibido algún tipo de **subvención de organismos públicos** para la adquisición o modernización de la embarcación?

Año	Cuantía	Concepto	% Subvencionado sobre el coste total	Organismo Responsable

13.- ¿Dispone de alguna otra fuente de ingresos? ¿Desarrolla algún tipo de actividad económica complementaria? Especificar cual qué % de sus ingresos representa.....

.....

.....

.....

- ¿Sabe si algún miembro de su tripulación desarrolla alguna actividad económica complementaria?

.....

.....

.....

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

Gobierno del Principado de Asturias
Consejería de Medio Rural y Pesca

14.- Intente hacer un repaso a las **principales fuentes de gastos** de la embarcación durante el año 2008

CONCEPTO		2008	Observaciones
Costes de producción / explotación	Retribuciones tripulación		
	S. Social tripulación		
	Combustible		
	Carnada		
	Reparaciones y mantenimiento		
	Adquisición de instrumental / medidas seguridad		
	Seguros de la embarcación		
	Licencias / Revisiones		
	Otros gastos de funcionamiento (Indicar cuáles)		

15.- ¿Está actualmente **pagando la devolución de algún préstamo**? Si ☐ No ☐

Montante inicial del préstamo		**Cuota mensual/anual**		**Montante que queda por pagar**	

Motivo del préstamo.....

.....

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

Indurot

GOBIERNO DEL PRINCIPADO DE ASTURIAS
CONSEJERÍA DE MEDIO RURAL Y PESCA

PRESPO

16.- ¿Cuál fue **el importe de la embarcación en el momento de comprarla?**

..... Euros ☐ Pesetas ☐

17.- Si en este momento vendiese la embarcación con todos los aparejos e instrumentos de navegación, **¿Por cuánto dinero estaría dispuesto a venderla?**

..... Euros

Observaciones.....
.....
.....

NORMATIVA Y ORDENACIÓN DE LOS RECURSOS PESQUEROS

18.- ¿Con cuál de las siguientes afirmaciones referidas a la actual normativa y ordenación de los recursos pesqueros está más de acuerdo?

- Es muy eficaz y promueve una explotación sostenible de los recursos pesqueros ☐
- En general es eficaz, aunque debería mejorar en ciertos aspectos ☐
- No es eficaz, pero dada la dificultad del sector es el único aplicable ☐
- En general es ineficaz y deberían cambiarse muchos aspectos del mismo ☐
- Es completamente ineficaz y habría que replantearselo totalmente ☐

Observaciones.....
.....
.....
.....
.....
.....

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

Indurot

GOBIERNO DEL PRINCIPADO DE ASTURIAS
CONSEJERÍA DE MEDIO RURAL Y PESCA

PRESPO

19.- Brevemente, ¿cuáles cree que son los principales **aspectos positivos** y los **aspectos a mejorar** de la actual normativa u ordenación de los recursos pesqueros?

Positivos:.....

.....

.....

.....

Negativos:.....

.....

.....

.....

.....

- ¿Qué cree que se debería hacer para mejorar los aspectos negativos?

.....

.....

.....

.....

20.- ¿Cree que actualmente la administración tiene dificultades para aplicar y hacer cumplir la normativa existente? En tal caso, ¿cuáles son estas dificultades?

.....

.....

.....

.....

.....

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

Gobierno del Principado de Asturias
Consejería de Medio Rural y Pesca

PROBLEMÁTICA DEL SECTOR Y SOLUCIONES DE GESTIÓN

17.- ¿Cuáles considera qué son los **principales problemas / retos a los que se enfrenta el sector pesquero artesanal en Asturias**?

.....

.....

.....

.....

.....

.....

18.- ¿Qué **medidas** cree que se podrían poner en marcha para **mejorar la situación actual del sector pesquero artesanal** y solventar dichos problemas?

.....

.....

.....

.....

.....

.....

.....

19.- ¿Cree que sería necesario **mejorar la comercialización y potenciar la diversificación** del sector con vistas a mejorar la rentabilidad? (Ejemplo: Creación de etiquetado que reconozca la calidad, frescura y sostenibilidad ambiental del arte empleado, otras alternativas de diversificación como pesca turismo, etc.)

.....

.....

.....

.....

.....

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es

- ¿Sabe si en esta cofradía se han llevado a cabo o planteado medidas encaminadas en dicha dirección?

.....

.....

.....

.....

20.- ¿Cree que podría ser útil y conveniente disponer de un órgano regional de consulta y discusión, que sirva como punto de encuentro, foro de discusión y transferencia de información entre la Administración, Organismos de I+D, el sector pesquero artesanal y demás organismos interesados?

.....

.....

.....

- ¿Estaría dispuesto a participar de una forma directa y continua con un organismo como el mencionado con el objetivo de mejorar la gestión y explotación de los recursos pesqueros?

Si ☐ No ☐ En tal caso, ¿por qué?

¿Le gustaría añadir algo más que no ha sido comentado durante esta entrevista?

.....

.....

.....

.....

.....

¿Podría facilitarme el contacto de algún otro armador al que pudiera dirigirme para recopilar información sobre el estado de las pesquerías artesanales en Asturias?

.....

.....

INDUROT, Instituto de Recursos Naturales y Ordenación del Territorio (Universidad de Oviedo)
Campus Universitario de Mieres
Teléfono Secretaría: 985 45 81 18 Fax: 985 45 81 10
Correo electrónico: indurot@indurot.uniovi.es