

Research and dynamics of small-scale fisheries in the region of Murcia

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RECHERCHE ET DYNAMIQUE DES PÊCHES ARTISANALES EN MURCIE (ESPAGNE)

RÉSUMÉ

En Murcie, dans le Sud-Est de l'Espagne, quatre grandes confréries de pêcheurs (Cofradías de Pescadores) gèrent l'essentiel des captures et de la flotte artisanale. Leur contribution à l'ensemble des activités de pêche est variable mais toujours importante: 43 à 92% de la flotte et plus de 28% de la production pour la période 1976-1986. Les différentes techniques, les saisons et les espèces capturées sont décrites.



Fig. 1

In: La Recherche Face à la Pêche Artisanale, Symp. Int. ORSTOM-IFREMER, Montpellier France, 3-7 juillet 1989, J.-R. Durand, J. Lemoalle et J. Weber (eds.). Paris, ORSTOM, 1991, t. I : 429-432.

The Region of Murcia is in the south-east of the Iberian Peninsula (Fig. 1). The littoral is 250 km long and it presents a steep relief in general, interrupted by small sandy spaces. Its continental platform is narrow, rough slope ploughed by submarine valleys. The salinity and average temperature of the water are the highest in the Spanish Mediterranean especially because of its dry and arid climate. The most remarkable geographical accident is the coastal lagoon of the Mar Menor (132 km in area and 6.5 m in depth).

Four big «Cofradías de Pescadores» (Fishermen Guild): San Pedro del Pinatar, Cartagena, Mazarrón y Aguilas centralizing most of the captures and shipping ; however there are also some other smaller landing and anchorage points for the small-scale shipping: Cabo de Palos, El Portús, La Azohía, etc.

1. SHIPPING

The criterion followed in this study has been to consider as small-scale shipping all those ships which are not of «arrastré» (bottom trawl), «cerco» (surrounding art) or «palangre de altura» (surface long-line) and in case of shared activities up to a maximum of 20 T.J.B. will be included. The average people on each ship is three. Table 1 shows the average technical characteristics of this fleet.

The contribution of the small-scale shipping in the «Cofradías» in relation to the whole activity in the Region, is variable: San Pedro del Pinatar 92 %, Cartagena 60 %, Mazaron 59 % and Aguilas 43 %. We must stand out the high percentage of the first one, due to the special conditions where the fisheries are carried out, the coastal lagoon of the Mar Menor.

2. ARTS

Table 2 summarizes the different sort of arts existing in the Region of Murcia specifying the period of fishing and the main species captured.

Some of these arts very expanded and practically the whole of the shipping makes use of them : trammel, bonitolera, moruna, etc, whereas some other of these arts are hardly used : moruna fina, golondrinera, boguera, etc.

The existence of a tunny-net in Punta de la Azohia (Cartagena) which holds up the migration of *Sarda sarda*, *Auxis rochei* and *Seriola dumerilii* together with the peculiarities of the arts used in the Mar Menor (Encanizada = traps made of cane which cut off the way between the coastal lagoon and the Mediterranean Sea ; Pantasana = surroundig net modified for *Mugil spp.*, etc...) deserve a special mention.

3. CAPTURES

The percentage of the captures of this type of shipping in relation to the whole fishery landed in the Region during 1976- 1986 shows significant values with slight oscillation along the years. (Tab. 3).

Its lower limit being always above 28 % of the whole capture.

4. CONCLUSIONS

Small-scale fisheries present a complex problem due to:

- its multispecific character and diversification ;
- the rotation of arts by the same ships, depending on the time of the year and the target species ;

- its difficult control because of the scattered landings, number of ships, lack of information about the fishing effort and captures, etc...

Socio-economically speaking the main characteristics of small- scale fishery are:

- its familiar structure ;
- its remarkable income contribution to the local economy ;
- the impact on turism, nautical services, gastronomy, etc... ;
- a remarkable lack of precision in ship censue, changes of arts and some other aspects of the official statistics.

As prior investigations, we must underline :

- description and control of the distribution and rotation of arts and ships on the coast ;
- location and delimitation of the main sinking points for each art ;
- size frequency and control of the fishing effort on the main specimen of commercial interest ;
- evaluation and diagnosis of small-scale fishery state for future regulation.

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Table 1 - Average technical characteristics of small-scale shipping

	T.R.B	H.P.	LENGTH (m)
Exclusively small-scale shipping	2,64	30	6
Shared activity	11,00	80	9

Table 3 - Percentage of the captures of small-scale shipping in relation to the whole fishery

YEAR	1976	1977	1978	1979	1980	1981
%	37	28	38	38	39	38
YEAR	1982	1983	1984	1985	1986	
%	35	37	33	40	35	

Table 2 - Arts, fishing period and main species

Sort of art	Denomination	Fishing time	Main species captured	
Nets	Gillnet Trammel	All year	Salmonete (<i>Mullus sp.</i>), sargo (<i>Diplodus sp.</i>), aligote (<i>Pagellus acarne</i>), magre (<i>Lithognathus mormyrus</i>), dorada (<i>Sparus aurata</i>)	
	Drifnet	Bonitolera	Sept/march	Bonito (<i>Sarda sarda</i>), lecha (<i>Seriola dumerili</i>)
		Pantasana	All year	Mugílidos (<i>Mugil labrosus</i> , <i>Mugil saliens</i> , <i>Mugil cephalus</i>)
	Surrounding net	Jábega rebajada	Dec/february	Chanquete (<i>Aphia minuta</i>)
		Golondrinera	July/sept	Golondrina (<i>Cheilopogon heterurus</i>)
		Chirretera	Oct/march	Chirrete (<i>Atherina sp.</i>)
		Boqueronera	Nov/february	Boquerón (<i>Engraulis encrasicolus</i>)
	Fixed net	Moruna	April/june	Lecha, bonito, melva (<i>Auxis rochei</i>), atún (<i>Thunnus thynnus</i>)
		Paranza	All year	Magre, salmonete, lenguado (<i>Solea solea</i>), langostino (<i>Penaeus kerathurus</i>), anguila (<i>Anguilla anguilla</i>)
		Tunny-net Bonitolera	March/july Sept/march	Bonito, lecha, malva Bonito, lecha, melva
Hooks	Hand	Nov/february	Calamar (<i>Loligo vulgaris</i>)	
	Trolling lines	Sept/january	Lecha, mero (<i>Epinephelus guaza</i>)	
	Long-line	Thin	Oct/may	Anguila
Bottom set		All year	Sargo, serrano (<i>Serranus sp.</i>), Congrio (<i>Conger conger</i>)	
Traps	Pot	Nov/april	Camarón (<i>Plesionika sp.</i>)	
Dredges	Boat-operated	July	Chirla (<i>Chamelea gallina</i>)	
Several	Encañizada	All year	Mugílidos, dorada, magre	