COMMISSION OF THE EUROPEAN COMMUNITIES
Directorate-General for Fisheries

Regional, Socio-Economic Study in the Fisheries Sector

ESPAÑA

Andalucía (parte mediterránea), Murcia, Valencia, Cataluña, Baleares, Ceuta, Melilla

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ABSTRACT

El objetivo principal del trabajo es detallar y tipificar las situaciones creadas, o capaces de ser creadas, por la política de pesca comunitaria en las zonas que **especialmente dependientes de la pesca,** en la perspectiva de un tratamiento específico para estas zonas, en términos de política estructural y social (medidas de acompañamiento).

Para poder analizar el impacto socio-económico de la imposición de medidas correctoras, y en especial para definir las diferentes medidas llamadas "de acompañamiento" a aplicar por la Comisión para resolver los problemas que se presenten, es imprescindible también el conocimiento del entorno, o contexto socio-económico de la zona, para poder calcular las posibilidades de empleo del personal excedente en los diferentes segmentos del sector pesquero.

Para poder cumplir con los objetivos de forma satisfactoria, será necesario proceder en tres etapas:

- La primera etapa; identificar las zonas características que forman cada región específica, identificándolas como unidades geográficas, atendiendo al fin propuesto.
- La segunda etapa; llevar a cabo un tratamiento completo de las partes descriptivas y analíticas del estudio para cada una de las zonas.
- La tercera etapa; hacer una síntesis, mostrando los elementos comunes a cada zona y las diferencias entre ellas, para toda la región.

Para completar este primer resumen, añadiremos que;

- La pesca en el litoral mediterráneo español se basa en la explotación de pocas especies - langostino de profundidad, merluza, salmonete, pulpo, etc. - de alta calidad que dan el mayor beneficio. La bio-masa esta constituida de sardina, anchoa y pescadilla azul, de menor precio pero en mayor cantidad.
- Todas las especies tienen valor comercial; lo que es importante a causa de la menor cantidad de capturas.

Durante muchos años la pesca ha disminuido su importancia en relación a otros sectores económicos. La industria terciaria de la economía española continúa su crecimiento con una fuerte disminución de las actividades agro-pesqueras.

El proceso del deterioro de la pesca española continúa, no por causa del problema de demanda, sino mas bien debido a las dificultades, que van en aumento, de los caladeros españoles. Entendemos que se deben buscar soluciones locales para no obligar a un cambio de residencia de los afectados por la reducción de la flota pesquera.

Una vez que se ha acordado y trazado el plan de reducción de la pesca, y calculado el personal que pasaría al desempleo, según cada puerto pesquero, se ofrecería condiciones de jubilación anticipada con remuneración ventajosa para los pescadores más viejos. De esta forma el desempleo afectaría al menor número posible de pescadores más jóvenes.

Posteriormente, y en el contexto de la situación socio-económico y las circunstancias de cada zona, se procedería a ofrecer soluciones para el resto del personal que tendría que ser desempleado. Esto se haría por un análisis de cada caso en particular para poder encontrar la la solución más idónea.

ABSTRACT

The main objective of the work is to detail and typify the situations created, or capable of being created, by the Common Market Fishery Policy, in the zones which are **particularly dependent on fishing** in the perspective of the specific treatment of these zones, in structural and social politics (transitional measures).

In order to analyze the socioeconomic impact of the corrective measures to be imposed, and specially to define the different measures called "transitional" that the Commission must take to to solve the problems raised, it is necessary to have a knowledge of the environment, or socioeconomic context of the zone to be able to correctly estimate the possibilities of re-employment of the surplus personnel in the different segments of the fishery sector.

In our opinion, in order to meet these objectives satisfactorily, it will be necessary to proceed in three steps:

- The first step; identify the characteristic zones which make up each specific region identifying them as geographical units, complying with the desired aim.
- The second step; carry out a complete treatment of the descriptive and analytical parts of the study for each of the zones.
- The third step; do a summary, showing the elements common to each zone and the differences between them, for the whole region.

To complete this first overview, we will add that:

- Fishing in the Spanish coastal Mediterranean is based on the exploitation of a few species - deep-water shrimp, hake, mullets, octopuses, etc. - of high quality; these provide the largest economic benefits. Biomass is made up of pilchard, anchovy and blue whiting, of lower price but in greater quantity.
- All the species have commercial value; this is important because of the lower quantity of catches.

For many years fishing has continued to lose weight in relation to other economic sectors. The Tertiary Industry of the Spanish economy continues to increase with a strong decrease in the activities of agro-fisheries.

The deterioration process of Spanish fishing continues to increase, not because of the problem of demand, but rather due to the ever-increasing difficulties of the Spanish fishing grounds. We understand that solutions have been sought locally so as not to force a change of residence on those affected by the reduction of the fishing fleet.

Once the reduction plan of the personnel that would become unemployed has been agreed upon and drawn up, according to each fishing port, conditions of anticipated retirement would be offered, with advantageous remunerations, for the older fishermen of each place. In this way unemployment would affect the smallest possible number of younger fishermen.

Subsequently, and in the context of the socio-economic situation and background of each place, we would proceed to offer solutions to the rest of the personnel that would have to become unemployed. This would be done by a case by case analysis in order to find the best solution.

ABSTRACT

L'étude a pour objectif principal de décrire en détail et de classer les situations créées ou susceptibles d'être créées par la politique commune de la pêche dans les zones qui dépendent fortement de cette dernière, mais aussi de prévoir, pour chacune d'entre elles, un traitement spécifique ainsi que des mesures structurelles et sociales (mesures d'accompagnement).

Il est par ailleurs nécessaire de bien connaître l'environnement socio-économique des zones visées pour analyser l'incidence des mesures correctives nécessaires sur celui-ci, pour définir d'une manière générale les mesures d'accompagnement que la Commission doit adopter pour résoudre les problèmes qui surgissent et pour estimer convenablement les possibilités de réemploi des excédents des divers segments du secteur de la pêche.

Il sera nécessaire de procéder en trois étapes pour atteindre ces objectifs de manière satisfaisante :

- la première : identifier les diverses zones qui constituent la région en tant qu'unités géographiques, compte tenu de l'objectif visé;
- la deuxième : traiter intégralement les volets analytiques et descriptifs de l'étude consacrés à chaque zone;
- la troisième : rédiger une synthèse mettant en relief les points communs à chaque zone et les différences entre elle, pour l'ensemble de la région.

Pour être complet, il convient également d'ajouter que :

- la pêche dans les régions côtières méditerranéennes de l'Espagne repose sur l'exploitation de quelques espèces (crevette nordique, merlu, mulet, poulpe, etc.) de haute qualité qui procurent les meilleurs bénéfices. La biomasse est constituée de pilchards, d'anchois et de merlans bleu, de moindre valeur mais disponibles en plus grandes quantités.
- Toutes les espèces ont une certaine valeur commerciale, ce qui n'est pas négligeable compte tenu du niveau plus faible des captures.

Pendant de nombreuses années, la pêche n'a cessé de perdre du terrain par rapport à d'autres secteurs économiques. L'industrie tertiaire de l'économie espagnole continue ainsi à prospérer, alors que les activités agro-halieutiques ne cessent de régresser.

Le processus de dégradation de la situation du secteur espagnol de la pêche ne cesse de s'aggraver, non pas à cause de la demande, mais en raison des difficultés sans cesse croissantes des lieux de pêche de l'Espagne.

Nous pensons que des solutions au niveau local doivent être cherchées pour que les pêcheurs frappés par la réduction de la flotte ne soient pas obligés de changer de lieu de résidence.

Lorsque le plan de réduction aura été approuvé et que le nombre de pertes d'emplois par port aura été planifié, les pêcheurs les plus âgés se verraient offrir une préretraite avantageuse. De la sorte, le nombre des jeunes qui seront frappés sera limité au minimum.

Par la suite, des solutions devraient être offertes à toutes les autres personnes qui risquent de perdre leur emploi, en tenant compte de la situation socio-économique et géographique de chaque endroit visé. La meilleure solution en la matière devrait être cherchée en procédant à une analyse cas par cas.

REGIONAL SOCIO-ECONOMICAL STUDY ON THE FISHERY AND AQUACULTURAL SECTOR ON THE MEDITERRANEAN REGION E-3

TABLE OF CONTENTS

2.8 Fishing Fleet.
2.8.1 Observations.
2.8.2 Development between 1970s and 1990.
2.8.3 Percentage of the Spanish Mediterranean fleet compared to the national fishing fleet as a whole.
2.8.4 Distribution of zones.
2.9 Summary of the current fishing legislation.
2.9.1 Seine fishing of the national fishing grounds.
2.9.2 Fishing gear denominated "claro" in the Mediterranean.
2.9.3 Drifting longline fishing.
2.9.4 Fresco trawling.
2.9.5 Fishing with small fishing craft.
2.10 The fishing effort.

3 Zonal plan.

4 Aquaculture.
4.1 Introduction.
4.2 Current and future production in marine aquaculture.

5 Processing sector of fishing and aquaculture products.
5.1 Socio-economic importance of the sector.
5.2 Production
5.2.1 Sub-sector of fishing preserves and molluscan, and semipreserves of anchovies.
5.2.2 Subsector of smoked and salted semipreserves.
5.2.3 Objectives and investment provisions in the sector.

6 Marketing sector for fishery and aquaculture products.
6.1 Marketing of fresh products.
6.2 Frozen product marketing.
6.3 Aquaculture product marketing.
6.4 Fishing ports and their fish markets
6.4.1 General statements
6.4.2 Spanish participation in the Community Aids.
6.5 Auxiliary industry of the sector.

SECOND PART

1 Common measures for the maritime fishing of the Mediterranean.
1.1 Stages and constitutive means of common rule
1.1.1 Legislation scope.
1.1.2 Implementation of fishing jurisduction beyond the current jurisdictional waters.
1.1.3 The designing of a model for the management and conservation resources.

2 Global situation.
2.1 Global aspects in trawler fishing
2.2 Global estimation of trawler captures and fishing efforts.

2.3 Fishing ground situation.
2.3.1 Division 37-1-1 (Catalonia).

REGIONAL SOCIOECONOMICAL STUDY ON THE FISHERY AND AQUACULTURAL SECTOR OF THE MEDITERRANEAN REGION E-3

1 - INTRODUCTION: PURPOSE OF THE STUDY AND DELIMITATION OF ZONES.

1.1. PURPOSE OF THE STUDY.

The main objective of the work is to detail and typify the situations created, or capable of being created, by the Common Market Fishery Policy, in the zones which are **particularly dependent on fishing** in the perspective of the specific treatment of these zones, in structural and social politics (transitional measures).

In order to carry out the work, we initially come across the problem of not having enough detailed knowledge, regarding the resources of the Spanish Mediterranean coast and its possible evolution, overfishing in certain areas, etc. This information allows us to pinpoint the present and future situations, the number and type of vessels to be reduced in each zone of the Mediterranean region, closed seasons for fishing, or other conservation regulations to be established, and consequently we will be able to arrive at the conclusion of what effect these circumstances have on the fishing work force.

Now, in order to analyze the socioeconomic impact of the corrective measures to be imposed, and specially to define the different measures called "transitional" that the Commission must take to solve the problems raised, it is necessary to have a knowledge of the environment, or socioeconomic context of the zone, to be able to correctly estimate the possibilities of reemployment of the surplus personnel in the different segments of the fishery sector.

Therefore, the study has to state in detail, for each zone:

- situation of resources and their possible evolution, pinpointing fishing areas in each zone,
- parameters related to the whole fishing sector, distribution by zones, types of vessel, classes of fishing and their areas;
- distribution of the labour force - by vessels, ports and fishing areas - stating the age profile according to fishing ports that will make the search for solutions easier according to circumstances;
- parameters related to the economic and social environment of the whole (local industry, infrastructures, local unemployment rate, employment programs under way, etc);

In our opinion, in order to meet these objectives satisfactorily, it will be necessary to proceed in three steps:

- The first step; identify the characteristic zones which make up each specific region identifying them as geographical units, complying with the desired aim.
- The second step; carry out a complete treatment of the descriptive and analytical parts of the study for each of the zones.
- The third step; do a summary, showing the elements common to each zone and the differences between them, for the whole region.

Therefore, the following points have to be taken into account:

- The approach of the regional study has to be pluri-disciplinary, with socioeconomic prevalence, combining the specific approach to fishing with that to regional economy; we must not forget that it is in this socioeconomic context that the solution has to be found, and finding it is the essential purpose of the present study.

- The information about the fishery sector, must be accurately obtained according to the established limits, at national and regional levels at first, and then separately for each zone, ending up with a readjustment of the information for the region, if necessary, after the corresponding detailed study of the differences found (possibly in the number of vessels and crew-members on board).
- The socioeconomic prevalence should not result in a lack of rigor and accuracy in the necessary technical approach, specially referring to aquaculture and infra-structures.

1.2 IDENTIFICATION AND DELIMITATION OF THE ZONES MAKING UP THE REGION.

1.2.1. Criteria.

The Delimitation of zones is based on two criteria:

1 - The description of a fishing zone can be based on the fact that **its fleet uses the same nets**, the **same fishing areas** and for the **same product**; or based on the **home fishing port**, around which a set of activities linked between them (production, processing, maintenance, marketing, etc.) can be structured. Also because of the existence of a specific natural environment (wet areas, estuaries) where fish or aquaculture activities are carried out.

Along the Spanish Mediterranean shore-line, although some very important fishing ports are to be found, the fleets are normally distributed along the coast in a fairly uniform way, but their characteristics depend on the Autonomous Community where its home port is located. There are no "central fishing ports" that act as a base for deep sea fleets.

2 - Statistic and State Administration requirements, impose divisions which are not always in accordance with the zones limited by the criteria "based on fishing" as stated above. These divisions cannot always be included in a specific homogeneous type without decreasing its size unduly. In other words, the zones must, as well as constituting a logical unit referring to the fishing plan, as far as this is possible, must include the existing functional and administrative delimitations.

1.2.2. Zone delimitation.

At an early stage we found it was suitable:

a) To divide the Mediterranean region to be studied, into zones corresponding to level II regions of the enlarged Community.

b) To consider the disadvantages of such divisions, keeping in mind the homogeneity of the general fishing system, administrative divisions, economic development, rate of unemployment, etc.

The level II regions, considered by the European Commission for statistical purposes, not only correspond to different fishing areas, each one belonging to a different type of fish or method, but also belonging to different Autonomous regions established in Spain according to its development and the rate of unemployment, the industrial sector (Industrial Catalonia, Agricultural Andalusia), population nucleï (urban or rural areas) or physical situation (peripheral regions, central areas, islands..).

All these considerations have lead us to establish the level II Community regions, as the Mediterranean coastal areas to study. And more so, bearing in mind that the different administrations of these autonomous regions logically carry out the most complete studies on local fishing conditions, development and unemployment. They also have the most exact idea about the possibilities of the region and the measure of aid applied to them at regional, national and community levels.

In Spain, the statistics of the fishing fleet and annual catchs have been established for the Mediterranean according to the zones: South Mediterranean, Levante, Tramontana and Balear. From our point of view this division presents

great disadvantages because of the reasons already mentioned.

Therefore the delimited zones for the Spanish Mediterranean area will be:

- ANDALUSIAN.
- CEUTA AND MELILLA.
- MURCIA.
- VALENCIA COMMUNITY.
- CATALONIA COMMUNITY.
- BALEAR ISLANDS.

FIRST PART

1. SPANISH MEDITERRANEAN COASTAL REGION AND ITS POSITION IN NATIONAL AND E.C. CONTEXT.

The Mediterranean is a closed sea, with a continental platform which is generally very narrow, and a rather scarce biological production. Water entering from the Atlantic circulates slowly and takes between 80 and 1450 years to renew itself (Murdoc and Onuf, 1972 - PNUE, 1988). This slow renewal allows the accumulation of chemical waste in alarming quantities, and even more so if the increase in coastal population caused by tourism is taken into account.

Tourism has, in effect, a negative influence on coastal fishing, because:

- It hinders the purchase of coastal lands for acuaculture purposes.
- It increases domestic sewage waste during the tourist season, causing atrophy in the case where no facilities have been adapted for its treatment, with the consequent danger to the health of the coastal population.
- The strong demand for sea food leads to an increase in prices and catches, and results in an excessive increase in the overall fishing effort.

Atrophy of the waters no doubt has an adverse effect on the Mediterranean ecological system, specially the effect of petrol on demersal species. For this reason, special care must be taken with trawling which, in general, tends to be excessive.

Coastal Mediterranean Spain begins at the tip of Europe. The coast of Andalusia extends from Gibraltar and has very different caracteristics from the South Atlantic Andalusian coasts: no important rivers flow into the Mediterranean on the Andalusian coast unlike the Guadiana and Guadalquivir rivers which flow into the Atlantic Coast. The continental platform narrows as much as the Cantabrian. With only the Straits of Gibraltar to cross, there is a change not only in the landscape and the sea, but also in the climate, the construction of fishing vessels, and even the men manning them.

In any case, the influence of the Atlantic is felt in the Sea of Alboran; Malaga can still profit from the passage of migrant species, and important outcrops exist along the coast that encourages the presence of important local fleets.

Murcia, in the lagoon of Mar Menor, has a very important natural centre for Acuaculture, its own particular people and way of fishing.

Except in certain points of the Mediterranean coast, the level of the fishery sector in the region is poor, and the situation of the greater part of its fishing communities is very different from that of Vigo or Bermeo. The fact that only 13% of national fishing comes from the vast Mediterranean coast is quite meaningful.

One must travel on to the area of the Ebro estuary for circumstances to improve: a greater quantity of nutrients are provided by the river, a broader continental platform has been formed by sediment, better ships are built, a higher standard of living is obtained for the fishermen. From here to the French Border one finds the most prosperous fisheries.

Of all the coast, the most important fishing ports are those of Malaga,

Adra and Almeria in Andalusia, Aguilas, Mazarron and Cartagena in Murcia, Santa Pola, Alicante, Valencia, Castellon and Vinaroz in the Community of Valencia, Sant Carlos de la Rapita, Amposta, Cambrils, Tarragona, Vilanova i la Geltru, Barcelona, Arenys de Mar, Sant Feliu, Rosas in Catalonia.

To complete this first overview, we will add:

- Fishing on the Spanish Mediterranean coast is based on the exploitation of a few species - deep water shrimp, hake, mullets, octopuses, etc, - of high quality; these provide the largest economic benefits. The biomass is made up of pilchard, anchovy and blue whiting, of lower price but in greater quantity.
- All the species have commercial value; this is important because of the lower quantity of the catches.
- In a biological production model, the current catch corresponds to very low quantities compared with excessive fishing efforts (overfishing); thus, the small oscillations should be irrelevant to circumstances related to recruitment or climate, etc. - not meaning any substantial improvement in the exploited population.
-These small variations, given the high economic value of the catch, may represent strong opportunities for investment, in spite of the current prohibitions on product expansion, especially for trawlers.
- The small pelagic species could, in given circumstances, improve production.
- The fisheries with small fishing boats - lines, longlines, and especially with fishing gear for catching coastal shellfish - have undergone important growth in the last few years; with these boats it is possible to obtain species difficult to catch by other means, such as large-size hake.
- The Mediterranean fishery supports itself through its large economic value. Its importance is maintained not by fish for daily consumption, but by luxury foods, which are bought at high prices (marginal value). Taking into account that the demand for luxury fish is generally higher than the supply, especially in certain places and seasons, the high monetary value puts a lot of pressure onto fishermen, and they accept with difficulty any restrictions meant to reduce the level of overfishing.

2. FISHING

2.1. FISHERIES PRODUCTION AND CONSUMPTION IN SPAIN AND ITS MEDITERRANEAN REGION.

According to the Spanish Ministry of Agriculture and Fishing, the value of the total fishing production went from 242,800 million ptas for 1986 to 267,000 million ptas for 1989 but keeping inflation in mind it represents 238,640 million ptas for 1986.

Sector' own consumption went from 61,700 million for 1986 to 67,400 million for 1989 (1986 ptas 58,840 million), and the Gross Added Value dropped from 181,100 million ptas down to 179,800 million ptas for the period, representing a 0.7% real decrease.

For the same period the Personnel costs went from 151,000 million up to 170,800 million for 1989 (151,841 million for 1986 ptas) a net increase of .6%. Keeping in mind the reduction of labour in the sector, from 103,319 down to 89,074 for that period, representing an increase on the income per capita from 1.51 million ptas up to 1.70 million ptas which is to say a 12.6% in 1986 ptas.

The consumption of fish and its by-products has been practically stabilized in Spain during the last few years, according to data of the Ministry of Agriculture, Fishing and Nourishment (MAPA).

Demand is estimated at 30 kilos per person per annum. In 1990 there was a slight rise, in spite of the increase in the registered price, reaching 1,195,451 mT. of the products of consumed fishing, from which 766,000 mT.

corresponded to frozen and fresh fish.

The expense per person is reduced according to the increase in the number of family members. The increase of unipersonal households among the Spanish population is worthy of notice. It has reached 11% of the total, a figure still far from other European countries, such as Switzerland (29%), France (25%), Holland and the United Kingdom (22%).

The Index for the cost of food for fish was 6.7% higher in 1990 than that of December 1989.

Shellfish and crustaceans consumption reached 353,000 mT., increasing from the previous year. The consumption of fish preserves and of frozen products also increased.

The expenditure for fish products came to 11.5% of all food in 1990, the Northwest Region having spent more on fish, 13.9% more than the national average.

The retail sale of fish has continued in traditional establishments in Spain, with the small fishstores cornering 70% of the market, with little participation from supermarkets and hypermarkets, although this participation is growing.

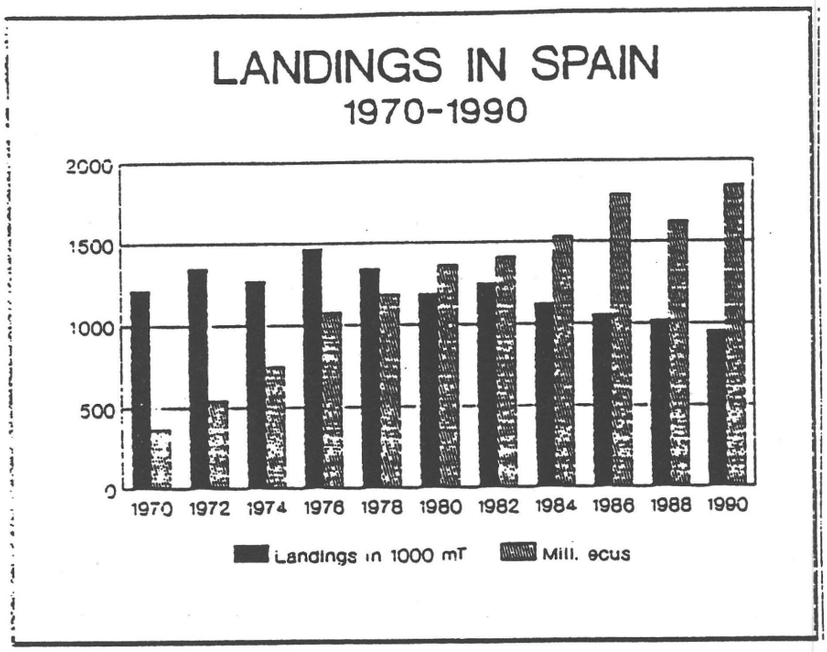
Between the years 1989 and 1990, the landings of the Spanish fishing fleet have been less than one million tons, a situation that has not occured for more than 20 years. The landings reached 974,245 tons in 1991, and 983,779 tons in the previous year. The greater part of this decrease is due to the inferior production of aquaculture farms, with a decrease of more than 24,000 tons. Deep-water fishing continues to increase, whereas coastal and off-shore fishing is diminishing.

The evolution of landings from 1927 to the present time has been the following (Table I); Graph 1, corresponds to the landings and their value in the period from 1970 to 1990.

LANDINGS IN SPAIN

YEARS AND PERIODS	mT.
1927	230,600
1931-1934	340,900
1941-1945	475,200
1951-1955	523,800
1956-1960	735,000
1961-1965	786,000
1966-1970	1,171,000
1971-1975	1,273,800
1976-1980	1,218,900
1980-1985	1,167,600
1986	1,056,200
1987	1,071,200
1988	1,047,600
1989	983,779
1990	974,245

TABLE I.-Source: Secretaría General de Pesca.



Source: our processing on Secretaría Gral. de Pesca data.
GRAPHIC 1.

And according to the fishing-grounds, species and areas of the littoral Mediterranean:

LANDINGS IN TONS

LANDINGS

ORIGIN	1988	1989	1990	% 1990/89
DEEP SEA	309016 *	322144 **	343661 ***	6.7
-Green cod	14630 *	12105 **	8818 ***	-27.1
-Deep frozen fish	294386 *	310039 **	334843 ***	8.0
SEA AND COASTAL	615701	553338	544622	-1.6
FARMS AND NURSERIES	111987	97454	83525	-24.6
TUNNY-FISHING	3421	1859	3487	87.6
SEAWEEDS	7495	8984	8950	-0.4
TOTAL	1047620	983779	974245	-1.0

Table II. Source: Our processing on Secretaría Gral. de Pesca data.

LANDINGS BY REGIONS, 1990

AREAS	FRESH/SALT FISH		FROZEN FISH		FARMS/NURSERIES		TOTAL	
	mT	10^9Ptas	mT	10^9Ptas	mT	10^9Ptas	mT	10^9Ptas
Cantabria	106,515	33,811	-	-	73	64	106,588	33,875
North West	215,980	56,310	257,306	32,735	73,413	4,591	546,699	93,636
South Atlantic	66,839	24,497	23,006	21,888	16	43	89,861	46,428
South Mediterranean	22,538	9,223	-	-	-	-	22,538	9,223
South East	27,138	9,690	152	48	-	-	27,290	9,738
Tramontana	72,047	23,092	-	-	23	8	72,070	23,100
Balearics	4,115	4,007	-	-	-	-	4,115	4,007
Canary Islands	29,450	3,567	54,379	15,407	-	-	83,829	18,974
TOTAL	544,622	164,197	334,843	70,078	73,525	4,706	952,990	238,981

Does not include green cod, tunny fishing and seaweeds

Source: Our processing on Fisheries Statistics, Ministry of Agriculture, Fisheries and Food, data.

Table III

The catchs in the Spanish Mediterranean Coast, corresponding to 25% of the national fleet, are very inferior considering the corresponding number of ships.

2.2. IMPORTANCE OF THE FISHING SECTOR TO THE ENTIRE SPANISH ECONOMY AND TO ITS MEDITERRANEAN AREA.

2.2.1. Socioeconomic differences among the various areas of the Spanish Mediterranean region.

The socioeconomic differences among areas or Spanish autonomies corresponding to European level II regions are not as large as those existing in other countries of the EEC; this is so, not only compared with Italy and Portugal, but also with France and even Holland.

The panorama of the Spanish regions has been modified significantly in the past few years, thanks to a policy of economic autonomy not having central or local governments interfering to an excessive degree.

According to the annual socioeconomic study of the Confederación de las Cajas de Ahorro (Confederation of Savings Banks), for the year 1990, the greater growth in the gross domestic product (GDP) was experienced in Extremadura (4.5%), in Catalonia and Murcia (4.2%); the smaller growths in the Canary Islands (0.7%) and in the Balearic Islands (1.3%) and in the three regions on the northwest coast.

During the triennium 1988-1990, the regional growth has been quite homogeneous throughout Spain: the annual cumulative rates are of the 5.5% for Murcia, of a 5.3% in Andalusia, a 4.1% in Asturias, and 3.4% in Canary Islands. Catalonia (5.1%) grows more than Madrid.

In this respect past reports of the Commission of the CEC, show for the 80's that all the Spanish regions, except for Asturias and Galicia, improved their average GDP per capita compared with the European regions whose GDP per capita is inferior by 25% to the Community average (Objective I regions). This

was not true of comparative regions in Italy, Northern Irland, Portugal or Greece.

As a consequence, the GDP of the Balearic Islands, the richest area of Spain, was 110% superior to that of Extremadura, a poorer autonomous area in 1990. That difference would be minor if consumer goods price differences are taken into account as well as the per capita revenue. However, only three years before the difference was even greater: 131%.

These differences between Spanish areas are slight if compared with those existing in the rest of Europe; the large differences were produced during the traumatic process of change during the period 1959-1975.

2.2.2. Mediterranean region demographic structure.

The Mediterranean area makes up 35.25% of the Spanish resident population. In general terms for Spain as a whole and particularly for the Mediterranean area, the population explosion tends toward zero growth. This phenomenon can be appreciated in 1992, the year in which the work market in the EEC opens up and the high unemployment rate may result in the partial emigration of youth which unable to find satisfactory employment in Spain.

The employment figures for Spain are the lowest in Europe, the national average now being 37%. The Autonomous Catalonian Community surpasses this by almost two points, the Balearics Region by one point and Valencia maintains the national average. Murcia is one point beneath the average, and the Andalusian Mediterranean Region is eight points below. In global terms, the employment figures for the Mediterranean Region surpasses by almost a point the national average.

The employment figures are identified with the degree of economic development and shows clearly that in Andalusia this last is very inferior to that of the rest of the Mediterranean regions.

2.2.3. Employment in the Mediterranean and the place occupied by the fishery sector.

For many years fishing has continued to lose weight in relation to other economic sectors. The Third Industry in importance of the Spanish economy continues to increase with a strong decrease in the activities of agro-fisheries. The process of deterioration of Spanish fishing continues to increase and not because of any problem in demand, but due to the ever-increasing difficulties of Spanish fishing-grounds, caused by overfishing of the resources. This deterioration is higher than the national average, currently reaching more than 0.30% of the gross regional product.

The participation of the Mediterranean fishery sector in the gross added value, is lower than the national average, since in the allocation of added value, the fishery sector only participates in 0.30% while the national reaches a 0.54%; consequently fishing in the Mediterranean may have a smaller economic importance than the rest of the regions.

2.2.4. Structure of the active population in the Mediterranean Region fishery sector.

The unemployment rate in 1989 in the Mediterranean fishery sector approached twice the total national average for fishing. In the Catalonian region, Balearics and Valencia the unemployment rate oscillates at around 16% while in Mediterranean Andalusia it surpasses 26%. The official unemployment rate in the Mediterranean fishery sector is higher than it should be because the

portion of the population working in the underground economy is included in the unemployment rate. Underground economy in the fishery sector is high due to the periods of closed seasons, sea conditions and the alternation of agricultural tasks with fishing tasks.

Overemployment (more employed people than jobs; some jobs are shared) in the Mediterranean Region affects some 2,000 workers, even when fishing companies have reduced staff on their ships. It is curious to observe that while in the Spanish fishery sector overemployment has been reduced as a consequence of scrapping and the exportation of ships, in the Mediterranean such overemployment has increased, which means that fishing companies are engaged in a campaign for reducing their crews.

2.2.5. Allocation of salaried personnel in the Mediterranean Region and percentage for the fishery sector.

The fishery sector in Spain and the Mediterranean has a smaller number of salaried workers. The Mediterranean Region makes up only 0.43% of the total of salaried workers and it is lower than the national average of 0.81%. That is to say, the dimension of employment in the Mediterranean fishery sector is half of the national.

Within the Mediterranean, the Catalonian region has the lowest quota of salaried workers in the fishery sector, with 0.29% of the total, the Andalusian Region having the greatest percentage.

As distinguished from the rest of the Spanish fleet, that of the Mediterranean region is limited, in general, to the local fishing-grounds, while the rest of the Spanish fleet is divided into coastal, offshore and deep-water fleets.

On the other hand, one must take into account that in the craftmanship fleet of the Mediterranean, shipowners do the work of skippers and netmakers, and for this reason there is a high proportion of entrepreneurs among crew members. It is not unusual to have entire families working as skippers, netmakers and crew members, being self-employed workers.

2.2.6. Employment in the fishery sector in the Mediterranean Region.

It can be seen that in this area the number of fishing entrepreneurs is greater than the national average for this sector because Mediterranean fishing involves a craftmanship industry, the majority of shipowners doing the work of skippers, and the "non" salaried make up more than 40% of the workers, serving to prove the above theory.

It is also obvious that, if the number of employees and salaried workers of the Mediterranean Region is about 22% of the national fleet, unemployment is almost twice that of the national average for the fishing fleet, the fundamental reasons being the dependence of the Mediterranean fishery sector on seasonal conditions and the customary practice of alternating fishing, agricultural and commercial activities.

2.2.7. Wages per capita in the fishery sector for the Mediterranean.

The wages of the salaried worker in the Mediterranean fishery sector are 5% higher than the national average. But this percentage is distributed differently among the various regions of the Mediterranean. In Catalonia the wage per crewmember is 11% higher than the national average, followed by Balearics and Valencia; In Murcia and in Mediterranean Andalusia, however, the wage per crewmember is similar to the national average.

3)

Barcelona has the highest salaries followed by Alicante and Tarragona because of the rate of development of these provinces compared with others along the Mediterranean. A decrease of the salaries in these provinces would mean a movement of workers from the fishery to other sectors. For this same reason, overemployement would be higher in these provinces.

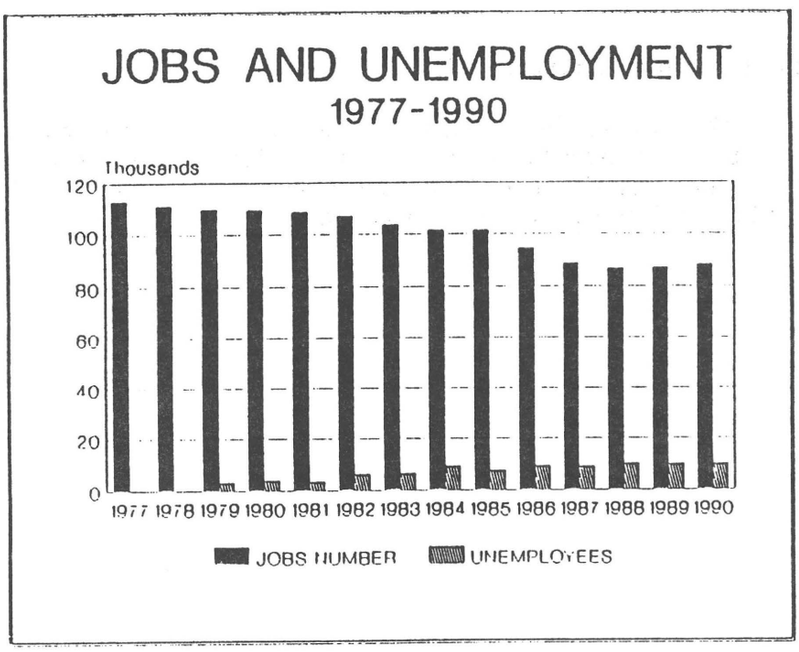
2.2.8. Structure and evolution of unemployment in the fishery sector.

Staff of the fishery sector is one of the most marginal work groups: 21% lack any type of education, 47% have only primary studies, and only 1.2% have gone on to grammar school or university level, and the rest have studied only at secondary school or Nautical Fishing School level. In Andalusia, the least advanced region in this respect, within craftmanship fishing, 54.8% lack any instruc-tion, and 29% have only completed primary studies. 18.1% studied in the Nautical Fishing School, and nobody reached baccalaureate level.

The difficulty of finding work not only compels many young people to stay in their rural or fishing environment, but also tempts people from other sectors to try to incorporate themselves into these environments, people who, because their lack of technical preparation, believe that they will adjust more easily to work they consider as simple.

In the fishery sector in Spain a 39% of the contracts are still oral; salaried personnel with firm written contracts make up only 51.3% in trawlers; 43% in dragnets, and 32.7% in longliners.

The evolution of jobs and the number of unemployed in the whole of the sector, is shown in the following graph, for the period 1976-1990, with data from the Maritime Fishing Yearbook and of the Social Maritime Institute:



GRAPHIC 2

The possibility that the merchant navy could absorb the excess of fishing personnel is void since they are in the same unemployment situation, which means that there is no movement of staff between the two groups:

	NUMBER OF UNEMPLOYEES			PERCENTAGE	
	TOTAL	FISHERY	MERCHANT MARINE	FISHERY	MERCHANT MARINE
1985	13753	7611	6142	55.34	44.66
1986	17068	9164	7904	53.69	46.31
1987	16679	8879	7800	53.23	46.77
1988	18573	10109	8464	54.43	45.57
1989	17460	9643	7817	55.23	44.77
1/3 1990	17758	9888	7870	55.68	44.32

Table IV
Source: Social Maritime Institute (ISM)

Unemployment has been influenced, in addition to the general crisis of the fishery sector, by the progressive reduction of fishing ship crews, due to technical progress as well as the need to reduce costs. In March 1990, the fisheries unemployment figures for Spain was as follows:

CERTIFICATE OR POSITION	No UNEMPLOYEES IN FISHERIES	% UPON UNEMPLOYEES
Fishing Captain	59	0.59
Offshore Skipper	179	1.81
1st Class Littoral Skipper	182	1.84
2nd Class Littoral Skipper	176	1.78
Local Skipper	115	1.16
Engineer	50	0.51
1st Class Engineer	80	0.81
2nd Class Engineer	282	2.85
Refrigeration engineer	3	0.03
Radio officer	4	0.04
Cook	239	2.42
Deckboy	50	0.53
Waiter	18	0.18
Diver	12	0.12
Fish Expert	27	0.27
Boatswain	256	2.59
Freeze Boatswain	1	0.01
Net maker	160	0.16
Motorman	110	1.11
Donkeyman	7	0.07
Greaser	613	6.20
Able seaman	6327	63.29
Others	930	9.40
TOTAL	9888	100

Table V
Source: Social Maritime Institute (ISM)

2.2.9. Remuneration systems.

In deep-water fleets and the greater part of off-shore fleets, crew members receive a salary, just as in traditional land companies.

But for the rest of the fishing fleet, predominantly in the Mediterranean, fishermen are renumerated "by share". Because of this, the concepts of "Monte Mayor" and "Monte Menor" have been established.

"Monte Mayor" consists of the gross income of each vessel, that is, the income from the sale of fish. After deducting the expenses incurred, the net income is distributed according to agreements that vary for each region and even for different boats in the same port. The crew-members' share is expressed by a percentage for each one, the total giving a global percentage for the crew which is usually about 50%.

The percentage given to the crew is known as "Monte Menor", which is divided into "parts", or units of remuneration. Every member has his "part", including the Skipper (even if he is at the same time the shipowner) as well as auxiliary land personnel.

2.3. THE SOCIO-ECONOMIC CONTEXT OF CATALONIA.

The latest studies carried out by the Bilbao Vizcaya Bank on Spain's national revenue and its provincial allocation, leads to the following conclusions in its results:

2.3.1. Evolution of the active population, employed and unemployed.

The annual growth rate of the Catalonian population is 1.19%, being among the Spanish regions counted as having a medium rowth rate. The total population of the area is 15.66% of the national.

The highest employment rate is found in Galicia with 41% (agricultural smallholdings), followed by Catalonia as a more industrialized region, with 39.6%.

The unemployment rate was increased in 1987 to 20.6% of the active population. The lowest unemployment rate was in Galicia with 12.7%, and Catalonia took third place with a rate of 20.7%.

The evolution of the working population as well as that of estimated jobs show growth in the last few years, but the number of estimated jobs grew more, undoubtedly due to the greater extension of underground economy.

2.3.2. Evolution of the gross domestic product.

The period 1983-1987 constituted the initiation of the recovery of the Spanish economy, very much affected by the oil crisis. The Autonomous Communities of the Mediterranean coastline, except Catalonia and, to a lesser extent, Andalusia, registered a growth in the GDP of more than 3.5% per year, accumulative. Catalonia provides 19.3% of Spain's GDP, with a growth of 2.6%, and a negative growth referring to agriculture and fishing of - 0.4%.

The attempts to save, invest and innovate in order to achieve competitive results, have been important in the last few years, but nevertheless these results are insufficient.

2.3.3. Evolution of the regional revenue.

The unequal value of the prices included in the gross added value of 25.6% generated by the agricultural and fishery sectors, and the gross added value of other sectors, together with the different amortization rates, produce an alteration in the evolution of the true revenue of each Autonomous Community.

The evolution of the regional revenue of Catalonia and of the GDP, was the following (Rate of cumulative annual growth 1983-87):

Regional revenue	2.7
Regional revenue per inhabitant	2.4
GDP	2.6
National revenue per person 1983	3
National revenue per person 1987	3

2.3.4. Income per Family

The Income per Family reflects the income flow obtained by families and non-profit making institutions in a given period. For Catalonia, which occupies second place after the Balearic Isles, the figures were the following:

Revenue per person in 1987	867,434
Percentage of the state average = 100	120
Annual average growth 1983-1987	1.3

2.3.5. Conclusions

1.- Expansion of the population and of the revenue on the Mediterranean Coast, including the Balearics, can be detected.
2.- Catalonia had a lower population increase than the national average.
3.- The overall activity rate has grown, but this may be attributed to regions such as Extremadura, Murcia, Castilla and Navarra, with scarcely any help from the Catalonian Autonomous Community.
4.- All the Autonomous Communities, with the exception of Asturias, showed an increase in employment in that period, with the Balearics at the head. Catalonia is among the last. The same could be said for productivity.

2.4. BALEARIC ISLANDS.

2.4.1. Evolution of employment generated by the fishery sector.

One must take into account that in dragnet and small fishing vessels, the skipper and the shipowner are the same person, and sometimes in trawlers as well; what is more, there is a group of fishermen known as "marrones" that, having another source of principal income, are registered as skippers of professional fishing ships, not in sports or leisure categories, in order to be able to use professional fishing gear.

During the decade of the 1960s - 1970s, the fishing population in the Balearic Isles was about 4,162 people, 3,428 of which fished in motor ships, 533 in small ships, and 201 in auxiliary land projects.

In the period of 1970 - 1980, the total number of fishermen decreased to 1,636, remaining at about 1,633 until 1988. At present the number of existing fishermen is 1,962; 48% of which are between 30 and 50 years old; the number of fishermen older than 50 is about 35%, and there is a very small number younger than 30.

The fishermen of the balearic fleet born in other autonomous regions, cover about 30%, in spite of the local difficulties in obtaining adequate and affordable housing. This is due to the progressive movement of natives to other, more advantageous, and better paid, work sectors, and to the poor situation of the fishery sector.

2.4.2. General considerations of the socioeconomic scene.

Fishing in the Balearic sea, as a clearly separated region within the Mediterranean, should be considered differently in relation to the larger fishing areas. A simple comparison of the volume of catches of these areas, applying identical criteria for the evaluation, would possibly lead to a less than accurate idea of the situation.

Fishing in the Balearic Islands, presents a specific situation, for the following reasons:

- The characteristics of the natural environment itself, since the Mediterranean is quite poor regarding fish production. The biomass of the bottom of the Mediterranean is scarce, a fact which is aggravated in some areas by the intensity of the fishing effort. On the other hand, the biomasss of the surface areas cannot be considered scarce, although there are large quantitative fluctuations.

- Another fact that explains this situation is the human factor. The population dedicated to fishing is reducing and aging as a consequence of the mechanization of fishing tasks and by the attractions of tourism, and other land activities, and fishing is left without adequate professionals. In spite of this,

and without affecting relative values, there has been in recent years a blending of young professionals with a new mentality into the fishing population of the Balearic Islands.

- The fishing companies of the area are characterized by their small size, since the number of companies coincides practically with the number of ships. This makes their operation very simple, but generally presents administrative problems.

- The fishing fleet is obsolete but in a very good state of conservation and the integration of technical progress in navigation and fishing equipment is good, except that referring to engine power. We believe that engine power would have to be strictly controlled as soon as it increases the fishing effort. However, it should be encouraged with respect to an increase in safety at sea when engine power cannot be assimilated, as in the case of the craftmanship fleet, to an increase in the fishing effort.

- There is a great variety of fishing gear, differentiated according to islands and even ports. Small fishing boats of craftmanship fishing, which is the most selective, should be promoted and improved, while the unselective fishing systems should be restricted, and the access of trawlers to fishing-grounds should be limited based on the production and the current effort, perfectly defined by the census of the Balearic fishing fleet.

- Port infrastructure is generally insufficient with respect to the needs of berthing and mooring, refridgerating stores, isothermal transportation to the interior of the islands, ice factories and slipways. The port problem exists in spite of the fact that natural conditions are favourable to the improvement of fishing ports for small craftmanship fishing vessels. The same is not true, evidently, in relation to trawling fleets.

- Production. It is evident that fishing production in the region is very reduced in relation to other Mediterranean regions to the extent that it does not even cover the insular demand. But traditional fishing-grounds are in a position of full exploitation, and for that reason it would be necessary to look to the possible exploitation of new fishing-grounds in the same geographical area, currently unexploited due to problems applicating the schedules regulating trawlers; the rotation of such fishing grounds with the traditional ones would permit a recovery of such areas. We must insist here that quality is constantly varying with respect to quantity.

- Fishing Administration. Once and for all, it must be kept in mind that the fishery sector is currently affected by a certain distribution of power between various Governing Bodies. In the case of the Balearic Isles, the negative effects of this distribution is reduced by the optimum coordination between the Central and Autonomous Fishing Authorities at the present time.

2.5. VALENCIA.

The trend for the working population and the estimated jobs in this region was a growth of 7% for the period 1983-1987, and the GDP increase for the same period was 10.4%.

Valencia was one of the regions that better supported the crisis during the past years. As an example, we can see not only the Car Industry but also the strong manufacturing industry with a lot of small and medium size factories, versatile enough to adapt to the crisis problem.

The Tertiary industry grew in this region more than the national GDP average. The idea for Valencia, as for the rest of the nation, is to keep sufficient investment and innovation going to expand its industry in order to be competitive compared with other countries.

The highest annual growth for the period 1983-1987 was for the region of Extremadura (inland Region), reaching an accumulative annual growth of 6.2%.

The Valencia Region reached nearly 4% in the same period. The Family Income growth in the same period 1983-1987 was higher than the national average (2.9%).

2.6. MURCIA.

In the last decade, one fifth of the spanish regions suffered depopulation and only one third increased their population. Murcia, with a growth rate of 3.7% is higher than the national average of 1.73%.

The growth of employement was 7.6% for the period 1983-1987, one of the highest in Spain. The Regional per Capita Income improved compared with the rest of the regions. The GDP grew more than 10%, Construction being the leading industry reaching 20% for the 4 year period. The Fishing Industry grew more than the national average, one of the highest in the nation. The growth for the agricultural/fishing industry was more than 10%, also a good position on a national level.

Governement aids improved the fishing industry, as well as market structures. Such aids had a special impact in the acuaculture development.

2.7. EAST ANDALUSIA. CEUTA and MELILLA

2.7.1. East Andalusia.

It has one of the lowest activity levels in Spain, with an active population of only 33.8% for the year 1987. For that year the unemployment rate in Andalusia, including Ceuta and Melilla, reached the highest national rate of 30.8%. The employment rate grew 7.2% for the period 1983-1987.

On analysing the Gross Regional Income for Andalusia, the agrofishing industry grew more than 10% for the period 1983-1987. This region was, together with Murcia, one of the most active for the Fishing Industry. The Regional Income reached an annual rise of over 4%. The 1987 Income per capita was 599.441 ptas, the next to last of the Nation.

Table VI defines different aspects of the socioeconomic situation of fishing in the Spanish Mediterranean Coast.

2.7.2. Ceuta and Melilla.

As far as government is concerned, Ceuta and Melilla are part of the Andalusian Autonomous Region. However, according to the EEC Treaty of Spanish Accession, these cities have speacial treatment in Protocol No. 2. These territories will not be considered Community Custom territories.

Economically, these territories are among the most depressed in Spain, the unemployment rate for 1988 being 26,3% for Ceuta and up to 30.2% for Melilla. These territories are included in EEC Development Plan Objective 1 for period 1989-1993.

NOTES TABLE V:b

(1) A ZONE SHOULD BE A SINGLE RECOGNIZED ADMINISTRATIVE UNIT.
(2) ACTIVE POPULATION IN THE WORKING-AGE GROUP IN ,000
(3) C, H, I, J COLUMNS IN ,000,000 ECUS; D COLUMN IN ECUS; CONVERSION RATE : 129 Pts/ECU.
(4) E, F, G COLUMNS IN UNITS.
(5) SOURCE DATA 1989.
(6) "OTHER" (JOBS, ACTIVITIES) REFERS TO ANY JOB/ACTIVITY RELATED WITH FISHERIES AND/OR AQUACULTURE NOT CONSIDERED UNDER ITEMS "FISHERMEN ONLY" AND "LANDINGS & 1ST PROCESS". These figures come from different sources.

(4)

ZONE(1)	general features of the zone				number of jobs in fisheries and related activities			added value of fisheries and related activities 1989.			relative dependance			
	population	total number of jobs(2)	GDP (3)		fishermen only	other jobs	total	landings and first handling proccessing activities	other activities	total	in terms of jobs (%)		in economic terms (%)	
			total	per capita										
	a	b	c	d=c/a	e	f	g=e+f	h	i	j=h+i	e/b	g/b	h/c	j/c
GERONA	476.7	218.5	4961.3	10410	1668	200	1868	31.38	37.30	68.68	0.8	0.9	0.63	1.38
BARCELONA	4719.2	1613.5	41573.6	8810	2482	333	2815	36.13	23.85	59.98	0.2	0.2	0.08	0.14
TARRAGONA	523.5	183.4	5045.1	9640	2415	322	2737	38.84	34.13	72.97	1.3	1.5	0.76	1.44
TOTAL CATALONIA	5719.4	2015.4	51579	9018	6565	855	7420	106.35	95.28	274.60	0.3	0.4	0.20	0.53
TOTAL BALEARIC I.	671.2	311.2	7437	11080	1689	121	1810	25.71	-	25.71	0.5	0.6	0.34	0.35
CASTELLON	449.6	164.7	3320.8	7386	1890	656	2546	33.85	92.64	126.49	1.1	1.5	1.01	3.80
VALENCIA	2126.7	712.3	16708.1	7856	1039	228	1267	17.81	25.10	42.91	0.1	0.2	0.10	0.25
ALICANTE	1182.9	408.2	9267.7	7835	2663	1166	3829	48.11	110.10	158.21	0.7	0.9	0.51	1.70
TOTAL C. VALENCIANA	3759.2	1285.2	29296	7793	5592	2050	7642	99.77	227.84	327.61	0.4	0.6	0.34	1.12
TOTAL MURCIA	1006.9	295.9	6285	6242	1248	220	1468	14.97	58.00	72.97	0.4	0.5	0.23	1.16
ALMERIA	432.1	132.8	2419.3	5599	2374	190	2564	24.34	3237	56.71	1.8	1.9	1.00	2.34
GRANADA	797.9	394.0	3412.4	4274	713	60	773	5.17	3.06	8.23	0.2	0.2	0.15	0.24
MALAGA	1078.3	293.9	6454.9	5986	3013	215	3228	42.19	30.85	73.04	1.0	1.1	0.65	1.13
TOTAL ANDALUSIA MEDIT.	2308.3	620.7	12286	5323	6100	465	6565	71.70	66.28	137.98	1.0	1.1	0.58	1.12
TOTAL CEUTA Y MELILLA	125.7	31.7	683	5439	440	-	440	4.10	-	4.10	1.4	1.4	0.60	0.60
TOTALS	13590.7	4560.1	107566	7914	21634	3711	25345	322.60	447.40	770.00	0.5	0.6	0.30	0.71

TABLE V – B

2.8. FISHING FLEET.

2.8.1. Observations.

The publication of fishery statistics in Spain was interrupted in 1986, but since then a detailed census of the fishing fleet has been put together, according to the guidelines of the EEC; this census was concluded in December 1990. The Maritime Fishing Yearbooks published before 1986 did not include the majority of fishing ships without engines; however, they are included in the census of 1990.

Another problem is that of the boats of retired fishermen, who are authorized in some regions to fish for their sustenance, which are sometimes calculated in the census and other times not.

These various factors are the principal reason for differences between the national census and the number of fishing vessels recorded directly at different ports, and even with the records of the fishing authorities of autonomous regions.

Another reason is classification by vessel types, since on occasion the same ship may be classified as more than one type, because in different seasons, vessels use different fishing gear.

An effort has been made, wherever possible, to homogenize the criteria, so that these differences would have a minimal effect on the outcome of this study.

2.8.2. Development between 1970s and 1990.

In the 1970s Spanish fishing vessels with engines counted as 15,750 vessels, a total of 653,191 GRT, and 1,799,187 HP; the number increased during that decade, and in 1980 a number of 17,555 motor ships was reached, with 749,411 GRT and a total power of 2,735,720 HP.

Since that date, the number of ships, their tonnage and their total power, has reduced gradually, until the census of 1990.

If the evolution of both the number of fishing vessels and of fish landings is studied, it will be observed that the increase in the number of ships coincides with that of the catches up to the year 1976; after this date, the increase in the fishing effort does not reflect an increase in the catches, but on the contrary, these are seen to diminish from year to year.

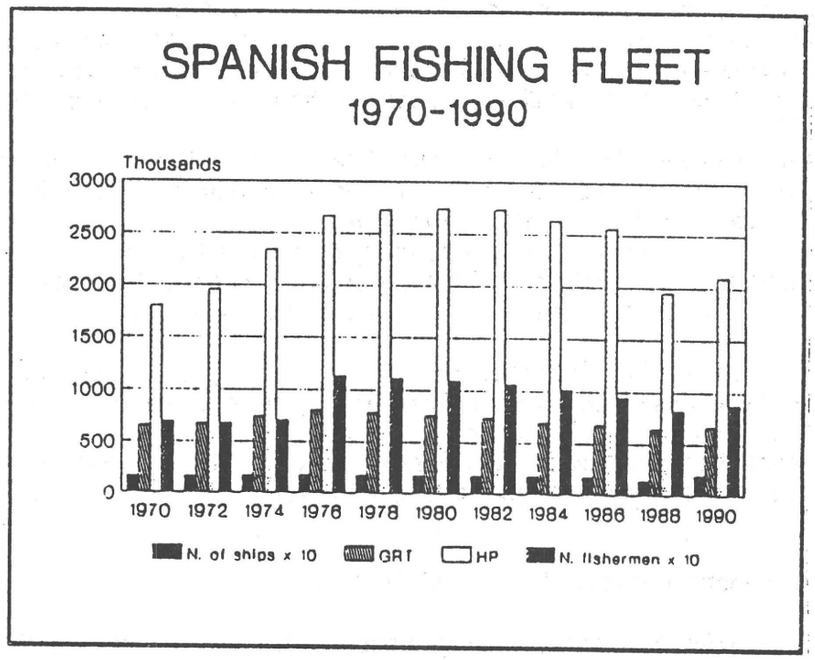
This is as much due to overfishing in national fishing-grounds, and others at a greater distance from the Spanish coast, as to the restrictions imposed by the establishment of a 200 mile area, the evident losses in historical fishing-grounds, and the successive agreements with third countries, ever more restrictive.

By detailed analysis of the productivity of different types of fishing, we can prove that dragnets are active for 30-50% of the year, lining for 48-58%, trawling in the Mediterranean for 41-55%, trawling in waters of the EEC (excluding Spain), about 60-70% of the year; dragnetting in the Mediterranean about 50-58%, etc.etc. Very few sectors could be maintained with such a low level of production.

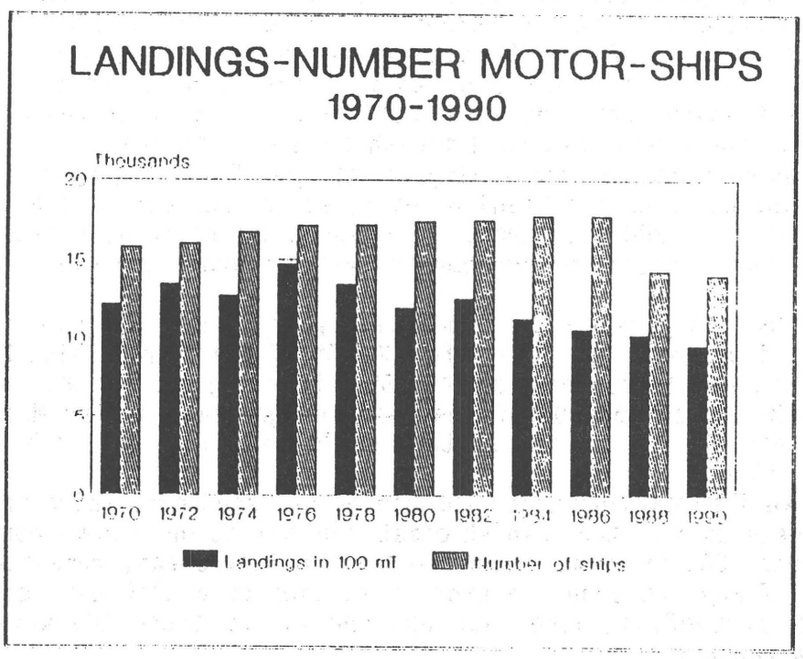
If we take into consideration the biological shutdowns which are becoming more and more necessary on the Spanish coast, the situation becomes more serious. In the past year, 362 trawlers, based in the Mediterranean, remained inactive in the months of May and June, to protect species of a slow biological cycle, such as squid, cuttlefish, line fish and shrimp; of these 203 were from the province of Tarragona.

It has been calculated that the Spanish fishing fleet has the capacity to catch 1,750,000 mT / year (4); the quantities landed in 1990 added up to 953,000 mT, from which it is deduced that it only fulfilled half of its potential capacity.

From all this it can be deduced that we need to increase the size of the Spanish fleet, in a manner adapted to its capture possibilities, so that fishing becomes truly productive.



GRAPHIC 4



GRAPHIC 5
Sources: Secretaría General de Pesca and Anuario de Pesca Marítima

2.8.3. Percentage of the Mediterranean region fleet in the national fishing fleet as a whole.

The following table shows the percentage for each province, out of the entire Spanish fishing fleet:

DISTRIBUTION OF THE SPANISH FISHING FLEET BY AUTONOMOUS COMMUNITIES

COMMUNITY	VESSELS	%	GTR	%	KW	%
BASQUE	894	4.5	102198	15.2	270760	13.7
CANTABRIA	299	1.5	11467	1.7	39965	2.0
ASTURIAS	753	3.8	11061	1.6	46829	2.4
GALICIA	9303	47.0	304845	45.4	718104	36.3
ANDALUSIA W	1958	10.0	103882	15.4	325519	16.4
CANARY IS.	1586	8.0	51076	7.6	145344	7.3
TOTAL ATLANTIC	14793	74.7	584329	86.9	1546521	78.1
CATALUNYA	1638	8.3	27779	4.1	154438	7.8
BALEARIC IS.	818	4.1	8119	1.0	31995	1.6
VALENCIA	1101	5.6	31362	4.7	144047	7.3
MURCIA	464	2.3	4310	0.7	21375	1.2
ANDALUSIA E	921	4.7	16693	2.5	76617	3.9
CEUTA	27	0.1	541	0.1	2416	0.1
MELILLA	6	0.0	254	0.0	887	0.0
TOTAL MEDIT.	4975	25.3	87058	13.1	431775	21.9
TOTAL SPAIN	19768	100.0	671387	100.0	1978296	100.0

Table VI
Including non-powered vessels (about 5.700)
Source: Spanish General Directorate of Fisheries, 1991.

2.8.4. Zones distribution.

The littoral Mediterranean accounts for approximately 25% of the total of fishing ships of Spain, but this is with only 13% of the total tonnage, which indicates that its ships are smaller in tonnage than the national average; on the other hand, the power of the Mediterranean fleet is 21.9% of the national total, that is to say, it is constituted by greater power vessels than the average for the entire Spanish fleet, which has obvious impact on its safety, which we will discuss in relation to different areas of the Mediterranean region.
The allocation by ship types:
(Graphic Tables VII-XIII)

TOTAL MEDITERRANEAN FISHING FLEET

TYPE	VESSELS	GRT	H.P.	CREW
TRAWLERS	1.306	63,586.09	372,557	8,541
SEINERS	477	11,778.32	97,751	5,044
DREDGERS	15	148.13	1,363	41
LIFT NETS	0	0.00	0	0
FIXED GILLNETTERS	2,183	6,495.08	68,305	4,457
DRIFTING GILLNETTERS	12	27.09	212	20
FIX-DRIFT GILLNETTERS	19	64.14	684	43
GILLNETTERS N/C	33	95.23	749	58
TRAPS	19	298.05	1,834	87
BOTTOM LONGLINERS	283	1,325.57	12,683	704
DRIFT LONGLINERS	67	1,542.01	7,971	326
LONGLINERS (OTHER)	113	198.11	1,810	218
MULTIPURPOSE	448	1,499.44	16,408	935
VESSELS N/C	0	0.00	0	0
TOTAL	4,975	87,057.26	582,327	20,474

Table

Source: Our processing on Secretaría Gral. de Pesca data.

TOTAL CATALONIA FISHING FLEET

TYPE	VESSELS	GRT	H.P.	CREW
TRAWLERS	441	19,756.95	133,598	2,348
SEINERS	183	4,658.66	41,752	2,205
DREDGERS	8	93.39	817	20
LIFT SETTERS	0	0.00	0	0
FIXED GILLNETTERS	638	1,987.18	19,735	1,223
DRIFTING GILLNETTERS	3	6.16	23	7
FIX-DRIFT GILLNETTERS	5	26.63	319	12
GILLNETTERS N/C	13	46.76	416	22
TRAPS	8	13.88	138	14
BOTTOM LONGLINERS	165	669.51	7,044	364
DRIFTING LONGLINERS	14	24.02	221	25
LONGLINERS (OTHERS)	20	31.77	217	29
MULTIPURPOSE	140	463.79	5,412	291
VESSELS N/C	0	0.00	0	0
TOTAL	1,638	27,778.70	209,692	6,560

TOTAL BALEARICS FISHING FLEET

TYPE	VESSELS	GRT	H.P.	CREW
TRAWLERS	75	3,238.07	18,008	433
SEINERS	15	161.83	1,696	65
DREDGERS	0	0	0	0
LIFT SETTERS	0	0	0	0
FIXED GILLNETTERS	549	1,655.27	16,635	855
DRIFTING GILLNETTERS	2	5.47	43	3
FIXED-DRIFTING GILLNETS	0	0	0	0
GILLNETTERS N/C	14	41.51	287	24
TRAPS	2	9.18	112	13
BOTTOM LONGLINERS	32	162.49	1,494	64
DRIFTING LONGLINERS	7	477.31	1,435	38
LONGLINERS (OTHER)	6	14.26	215	6
MULTIPURPOSE	116	353.69	3,517	161
VESSELS N/C	0	0	0	0
TOTAL	818	6,119.08	43,442	1,662

TOTAL VALENCIA FISHING FLEET

TYPE	VESSELS	GRT	H.P.	CREW
TRAWLERS	503	26,743.94	150,255	3,372
SEINERS	54	2,236.82	15,164	696
DREDGERS	2	13.76	222	7
LIFT SETTERS	0	0.00	0	0
FIXED GILLNETTERS	451	1,712.53	21,112	1,159
DRIFTING GILLNETTERS	4	13.68	146	7
FIXED-DRIFTING GILLNETS	12	35.72	329	25
GILLNETTERS N/C	0	0.00	0	0
TRAPS	7	251.55	1,392	51
BOTTOM LONGLINERS	15	51.62	532	38
DRIFTING LONGLINERS	2	109.41	235	10
LONGLINERS (OTHER)	2	3.79	10	2
MULTIPURPOSE	49	189.15	2,187	121
VESSELS N/C	0	0.00	0	0
TOTAL	1,101	31,361.97	191,584	5,488

Source: Secretaría Gral. de Pesca.

MURCIA TOTAL FISHING FLEET

TYPE	VESSELS	G.R.T.	H.P.	CREW
TRAWLERS	50	2.106.87	10.686	387
SEINERS	43	1.041.93	7.641	365
DREDGERS	0	0.00	0	0
LIFT SETTERS	0	0.00	0	0
FIXED GILLNETTERS	287	671.14	6.673	655
DRIFTING GILLNETTERS	1	0.83	0	1
FIXED-DRIFTING GILLNETS	0	0.00	0	0
GILLNETTERS N/C	3	4.40	18	6
TRAPS	1	19.98	150	7
BOTTOM LONGLINE	9	26.15	302	27
DRIFTING LONGLINE	16	314.21	2.126	93
LONGLINERS (OTHERS)	19	36.88	437	42
MULTIPURPOSE	35	87.20	990	64
VESSELS N/C	0	0.00	0	0
TOTAL	464	4,309.59	29,023	1.647

TOTAL ANDALUSIA FISHING FLEET

TYPE	VESSELS	G.R.T.	H.P.	CREW
TRAWLERS	228	11.187.64	57.401	1.922
SEINERS	168	3.481.76	30.035	1.617
DREDGERS	5	40.98	324	14
LIFT SETTERS	0	0.00	0	0
FIXED GILLNETTERS	258	468.96	4.150	565
DRIFTING GILLNETTERS	2	0.95	0	2
FIXED-DRIFTING GILLNETS	2	1.79	36	6
GILLNETTERS N/C	3	2.56	28	6
TRAPS	1	3.46	42	2
BOTTOM LONGLINERS	59	400.60	3.151	202
DRIFTING LONGLINERS	26	601.03	3.821	155
LONGLINERS (OTHER)	65	110.67	919	136
MULTIPURPOSE	104	392.46	4.193	287
VESSELS N/C	0	0.00	0	0
TOTAL	921	16.692.86	104.100	4.914

TOTAL CEUTA AND MELILLA FISHING FLEET

TYPE	VESSELS	G.R.T.	H.P.	CREW
TRAWLERS	9	552.62	2.609	79
SEINERS	14	197.32	1.463	96
DREDGERS	0	0.00	0	0
LIFT SETTERS	0	0.00	0	0
FIXED GILLNETTERS	0	0.00	0	0
DRIFTING GILLNETTERS	0	0.00	0	0
FIXED-DRIFTING GILLNETS	0	0.00	0	0
GILLNETTERS N/C	0	0.00	0	0
TRAPS	0	0.00	0	0
BOTTOM LONGLINERS	3	15.20	160	9
DRIFTING LONGLINERS	2	16.03	133	5
LONGLINERS (OTHER)	1	0.74	12	3
MULTIPURPOSE	4	13.15	109	11
VESSELS N/C	0	0.00	0	0
TOTAL	33	795.06	4.486	203

Source: Secretaria General de Pesca (Madrid), for year 1991

TABLE XXXIV

Source: Secretaría General de Pesca, last Census.

2.9. SUMMARY OF THE CURRENT FISHING LEGISLATION.

2.9.1. Seine fishing of the national fishing-grounds.

It is regulated by Royal Decree 2349/84, and Royal Decree 2571/86, that brings Spanish seine fishing into line with the EEC Regulation nr. 3094/86.

Fishing that is carried out with enclosing nets; with nets of rectangular shape used to round up fish, and is closed in the form of a bag in its lower part to catch them.

The ships that are devoted to seine fishing will have a minimal GRT of 20 GRT. The vessels currently in service will be able to continue until 31/12/88.

The maximum engine power will be placed at 450 HP. The minimum dimensions of the meshes measured diagonally will not be less than 14 mm, their length for the Mediterranean area will not be able to exceed 300 meters, and their height, 90 meters.

No seiner with artificial light will be able to fish at distances of less than 500 meters from another one with lights on.

2.9.2. Fishing gear denominated "claro" in the Mediterranean.

Order of 30th July 1983.

Purse seine gear rather like a sardine net, with corks on the upper line and sinkers on the lower, and somewhat curved downward where it has rings through which a purse line passes, and which is distinguished from the sardine net by the greater size of its mesh.

The ships will be larger than 25 GRT, except existing ships included in the census. They can only carry on board the purse seine. Activity stoppages of more than six months will mean a definitive decrease in the Census. The meshes will not be less than 100 mm., and the length of the gear will be 330 m. measured from cuff to cuff.

This fishing type will not be allowed to perform at depths of less than 25 meters, not including the months of June, July and August, which constitute the closed season for this gear.

Seine fishing in the Mediterranean is accomplished with the aid of very potent lights for grouping the fish. They have introduced gears and gillnets for pilchards and anchovies, with greater fishing capacity and the possibility of accomplishing several casts at night. Also, echosounders have been introduced to locate the fish, as well as mechanical haulers that make it easier to handle larger nets. All this has allowed the reduction of crew members per ship, from 21 to 14 men.

The intensive recruitment of the principal stocks on the continental platform takes a serious toll on fishing, and explains the poverty of its production.

2.9.3. Drifting longline fishing.

The legislation is specified in the corresponding ANNEX which accompanies the study.

Among the ships able to perform this type of fishing, are those included in the drifting longline Census, but it is not possible to carry out this activity simultaneously with any other of a different type of fishing gear.

By drifting longline, we mean fishing gear formed by a "main (mother) line", from which hangs others called "snoods", to which the fish-hooks are coupled. At the ends and along the length of the mother line are the necessary elements of sound and flotation, to maintain the set on the surface or at midwater, without touching the sea bottom.

The lengths of the drifting longline and the number of fish-hooks should be adjusted according to the midwater species to be caught:

SPECIES	MAXIMUM LENGTH	MAX. NUMBER HOOKS	HOOK LENGTH	BIGHT's LENGTH
Bream	25,000 m.	10,000	4.1±0.9 cm.	1.85±1.20 cm.
Sword-fish or blue shark	60,000 m.	2,000	11.25±4.25 cm.	4.80±1.20 cm.

Table XX
Source: Our processing on data from Fishing Legislation, 1990.

These vessels cannot carry on board other bottom or benthic gears, nor can they fish more than 20 days on average in a month. Infractions are sanctioned according to Law 53/82 of July 13 1982.

In the Mediterranean, the drifting longline fleet is concentrated around certain fishing ports, such as Algeciras, Motril and Aguilas. Small longliners of some 1,000-1,500 m. are frequently used for catching blue-sharks and related species. The fishing gear pulls in from the prow or the side, through a mechanical or hydraulic hauler, and the lines are released by the stern.

2.9.4. Fresco trawling.

Trawlnets are towed by several types of vessels that tow while the net touches the bottom, gear which catches marine species for human consumption or industrial use. It is classified by:

- Coastal
- Offshore
- Deep Water

.Coastal trawling is practiced within sixty miles of the coast.
.Offshore trawling is practiced at a distance of 60 miles, and in the area between the 10ºE and 20ºW meridian, and the 60ºN and 0º parallel.
.Trawling gears can be either bottom or benthonic, as well as from midwater trawling, operating between the surface and the bottom.
.Spanish legislation of the law passed on July 7, 1962 applies to bottom trawlers, as does the Council´s Regulation 3094/1986, of October 7.

For the Mediterranean, and from the meridian of Europe Point, it is obligatory that bottom trawling vessels for coastal fishing, be no larger than 35 GRT.; offshore vessels must be between 35 to 199 GRT., and deep-water vessels must be more than 200 GRT. They will not be able to increase their fuel power, except the semi-diesel engine, which can easily change to diesel by an increase of 40% of its power.

Only bottom trawling will be able to use the fishing gear known by the name of "Bon", with meshes of 19-20 mm. and gauge markers of 38-40, according to the staple class.

In midwater trawling, the adjustable depth gears will be adjusted according to the Order of June 30, 1975.

Ships of less than 35 GRT. included in the Census will be able to continue trawling, but solely in the area established by the schedule of their base port, and they will only be able to carry out repairs in order to renew the Certificate of seaworthiness. The right of these ships to perform trawling expires at the second sale after 30/7/75.

To be able to fish by trawler requires a fishing license, that allows them, with the previously indicated exception, to fish along all of the Mediterranean Coast, observing the schedules established for each port, and the rules that must be followed.

CLOSED SEASONS:

- Any type of fishing with trawling gears remains entirely forbidden at depths of less than 50 m.
- From the parallel of the frontier line with France, to the leading line at Villafranca del Penedes-Montgros, it is forbidden at depths of less than 100 m., from 1st April to 30th of June, inclusive.
- From the Lighthouse leading line of the port of Denia - Saw Arafor, to the meridian of Europe Point, it is forbidden at depths of less than 130 m. from 1st May until 30th September, inclusive.
- Other areas and limitations may be established when considered necessary.

Coastal trawling may only be performd five days a week, with a maximum schedule of 16 hours a day, from the time you leave the port until the time you return to the same port. The Brotherhood of Fisherman or Provincial Fishing Federations will fix, for its maritime districts, the fishing days and the exit and arrival times, with the approval of the naval authorities.

This fishing type is of principal importance in the Catalonian area, and is followed by the Balearic Islands. The vessels fish exclusively in fishing-grounds situated within a very restricted area from the base port; there is a great trend toward local fishing in all the Spanish ports on the Mediterranean.

The fishing tasks are carried out during the day, with the regulation schedule of the landing port. The catch is preserved in the hold in wood cases, in ice, until its sale in the Market. Deducting national and local holidays, and poor sea conditions, a loss per year of between 8 and 12 weeks can be calculated.

2.9.5. Fishing with small fishing crafts.

The artisanal fleet includes vessels of less than 35 GRT., that normally arrive and leave daily from their port. They operate in coastal fishing-grounds, and that are devoted to shellfish, molluscan and fish caught using gears of great selective capacity.

The artisanal fleet uses a great variety of fishing gear and among the most important are:

- Gears for mollusk fishing (rakes, dredges, drags, etc.)
- Gears for shellfish fishing (tracks, pots, crayfish traps for crabs, lobsters and shrimps)
- Fish-hook gears (lines, rip hooks, cambel, etc.)
- Longline gears (bottom set longline)
- Set Gillnets (thread, I scratch, volanta, etc.)
- Drifting gears (sardine, tangle net, bonitera, etc.)

The Spanish artisanal fleet is especially important due to its number of vessels (77% of the total), the select species of high market value which it catches, and because it makes up 40% of the nation´s fishermen.

The deterioration of the coastal area, places a serious limit on the catch, and a subsequent systematical increase in the fishing effort. This, together with small-scale exploitation, has led a great number of towns on the Mediterranean Coast to a low standard of living, with total dependence upon the fisheries.

2.10. THE FISHING EFFORT.

To be able to demand and achieve an accurate calculation of the fishing effort in the Mediterranean, or in any other area, we believe that it is essential to have an exact definition of what the fishing effort is, and to specify the way it is to be calculated.

To assess the intensity with which the means or instruments used are applied in a given catch, we use two measures:

1- Fishing time
2- Fishing power

Fishing time is divided into three basic units:

- fishing duration
- number of casts
- fishing days.

It will be necessary to properly define all the terms in order to homogenize their treatment. Therefore fishing time refers to time that the fishing gear has been in the water (midwater gear), or on the bottom (demersal gear). The effort is measured by the catch obtained per hour, etc. Other factors should also be considered, such as the fishing area and subarea, the main species, composition of the by-catch, and the size and power of the ship. We must also define very well what is understood by cast in each fishing type, and to differentiate the days spent in the fishing-grounds from the days spent actually fishing, etc., etc. It must also be considered that the number and size of the ships operating in a fishing-ground changes frequently, from moment to moment.

In order to homogenize the data on the fishing effort within a sub-area referring to engine power, it is helpful to study it through standard magnitude, in function of the fishing time.

The FAO establishes a series of priorities to measure the fishing effort:

- on periods of time, priority will have to be given to the number of fishing hours, of fish-hooks, and of casts;

- on the number of days in the fishing-grounds, or at sea. To measure the fishing effort through engine power, we first use the GRT, then the mean power, then the total mean length, and finally the number of fishing units working.

In our opinion, as a broad generality, it does not help that the Governments of some Community countries have decided to control the fishing effort. Their imprecision, and the unsurmountable difficulties of enforcement, are not only due to conflict with shipowners, but also to the impossibility of exercising control with insufficient data, and unspecific formulas.

It would be a very convenient consequence if, after a study, such Fishing Ministries of the member states, be given concrete methods for the calculation of the fishing effort, in given areas and subareas, for different fishing types, and other essential data, based on previous fishing experiences.

Let's take an example: in area 61 (Pacific NW), in subarea 1.5, class 3 ships (500-999 GRT:) have spent 34,585 hours fishing in 1982. The ships were trawlers and the principal species the cephalopod. Data for this ship can be compiled using the information that a trawling ship of those characteristics makes three casts per day of 5.5 average hours per cast, and that therefore 16.5 hours are spent fishing per day, and if its mean stay in the fishing-grounds is from 250 days, the hours per standard ship per year will be about 4,125 standard hours. Thus 34,585 fishing hours are equivalent to 2,096 days of fishing on ships of 500-999 GRT., with engine power per unit of between 1,500 and 2,000 HP., EQUAL TO 34,585 HOURS / 4,125 HOURS-SHIP = 8 STANDARD SHIP.

Nevertheless it is obvious that the limitations of the system, considering the possible data for each case, the fishing Authorities can, with the information extracted from the log books, complete the calculation of the fishing effort for each case. What is absolutely necessary is to unify and clearly define the method, to facilitate its assignment, and to enforce it.

There are three other methods for calculating the fishing capacity of a particular fleet in relation to available quotas, taking into account the definition and unit of measurement agreed upon, but we do insist that the essential point is to decide upon <u>one</u> for each specific case, to provide the basic data through a previous study carried out by assignment to the Commission, and to unify criteria.

Pinpointing the case of the Mediterranean Sea, in the ANNEX IV of Work Document C (90) of 25th July 1990, "Outline of a Common Fisheries System in the Mediterranean", defined the fishing effort as:

"The amount of fishing activities carried out over a defined period in a defined area depends on the following factors:

- the number of boats, their size, tonnage, engine power and technical equipment;
- the type and size of gear used; and
- the time taken by the boats to find and catch fish."

We understand that not all those factors can be applied as a general rule to all ships and fishing types, but that it would be necessary to specify the parameters for each specific case. Thus, the following fishing effort definitions can be outlined:

a) For all fishing modalities: The fishing effort is the days and hours spent fishing.

b) In trawling, one must also consider the power of the engine and/or the size of the doors. But nothing would be achieved without the strict control of mesh-size and minimal sizes of the species caught.

c) In seine fishing, in addition to that expressed in a), the size of the gear and measurements of the meshes, the GRT, and the power.
d) In artisanal fishing, however, we believe that the only way to measure the effort would have to be the size and number of the nets, the number of fish-hooks and their size, the actual time spent setting the nets or time spent not working.

3. ZONAL PLAN.

The zonal plan used by Spain for the its artisanal fishing is very important for the Mediterranean Zone due to the narrowness of the continental platform and the great number of small fishing boats.

The Zonal Plan for the period 1992-1997, will be applied to 3,225 ships, with a total of 9,433 GRT, totalling a global power of 68,333 Kw, and some 6,904 crew members.

The Spanish zonal plan estimates the evolution of fishing fleets on the basis of the age and the length of the ships. We think that such data is not very representative, so we have made allocations for ports, gear type employed, and where possible, the fishing-grounds used.

The Zonal Plan is limited with respect to indicating high-priority intervention shafts:

- RENOVATION, for those of more than 30 years of age, a 20% of the total tonnage (some 1,517 GRT of new constructions).
- MODERNIZATION, limited to 8% of the tonnage of ships between 10-20 years (about 11,233 GRT.).
- DEFINITIVE STALL, without specifying upon what class of ships this will fall, unless it refers to the POP 1992-1996 for the percentage of withdrawal (1,2% of the fleet together with the fish).

For the review of legislative and corresponding governmental measures, the Zonal Plan refers again to the POP 1992-1996, being submitted to the Multiannual Guidance Programs, in which, as we shall see, nothing concrete is determined.

4. AQUACULTURE.

4.1 INTRODUCTION.

Spanish aquaculture occupies a good place among the Community countries, due mainly to the initiative of the private sector, such as in the case of the mussel where Spain is at the forefront of world producers. This success is also due to the optimal evironmental conditions of Spain's geography.

AQUACULTURE PRODUCTION IN EEC COUNTRIES IN 1989 *

Country/cathegory	Fish	Crustaceans	Holluscs	TOTAL
FRANCE	43080	330	180560	223970
SPAIN	18288	50	200400	218738
ITALY	37628	-	90000	127628
LOW COUNTRIES	1850	-	91000	92850
UNITED KINGDOM	45140	10	9940	55090
GERMANY	21651	-	19080	40731
DENMARK	30750	-	-	30750
IRELAND	6414	-	13160	19574
PORTUGAL	1598	-	7425	9023
GREECE	5090	-	230	5320
BELGIUM	1650	-	-	1650
TOTAL	213139	390	611795	825324

* Provisional data in metric tons.

Table XIV
Source: EEC

In 1980 the first National Convention on Marine Cultivation met, putting together a document of Strategic Plan for Aquaculture; Law 23 / 84 of Marine Cultivation, June 1984, gathers all previous legislations for the sector, and clarifies the domain of Autonomous Governments.

Spain's accession to the EEC in January 1986 coincided with the expiration of the period established by Regulation (EEC) 2908/83 of the Council; because the guidelines of the Common Fisheries Policy still had not been set, the Council was compelled to extend the term of the cited Regulation until 1986.

The general guidelines of the Common Fisheries Policy for the decade 1987-1996 were defined throughout 1986, the structural aids being defined by Council Regulation (EEC) no. 4028/86, on community measures to improve and adapt structures in the fisheries and aquaculture sector.

In 1991, by the Order of 7 of October on capital transfers to autonomous communities for National Plans of Marine Cultivation, Central Spanish Management allocates to the autonomies the necessary capital to carry into effect the development of the indicated Plans in the region.

4.2. CURRENT AND FUTURE PRODUCTION IN MARINE AQUACULTURE.

A better reference is without doubt the current degree of application of the multiannual guidance programme for the period 1987-1991, which was elaborated in Spain in 1986, and approved by the Commission by the December Decision of 1988 (D.O. nº L, 4, of 7/1/88).

Three years after the vigorous implementation of the aforesaid Program, the results have been very positive for Spanish Aquaculture; in the year 1989, the products of marine cultivation represented 20% of the total consumed in Spain, having obtained 280,000 tons out of a total of 1,100.000 of the fishery sector. The development of marine cultivation has also meant an improvement in the employment of the sector, it being calculated that between 10,000 and 12,000 of the work posts go to serve aquaculture.

Of all the species cultivated in Spain, it is the mussel which is extracted in greatest amounts: 245,000 tons, the leading producer in Europe and the second world.

The Spanish panorama of marine cultivation in January 1991 is the following:

ACTUAL SPANISH OVERWIEV OF AQUACULTURE (HARCH 1989)
AQUACULTURE ENTERPRISES (CENSUS)
CLASSIFICATION BY SPECIES AND SPECIALLITY

	Turbot	Bass	Clam	Oyster	Shrimp	Other	TOTAL
Hatchery	1	1	2	2	-	-	6
Feedings	15	18	50	7	10	8	108
Integrated culture	3	4	5	1	6	-	19
TOTAL	19	23	57	10	16	8	133

Table XV

Source: FROM

It could be said that on the whole the results were contradictory: on the one hand there are companies that are already obtaining benefits, or at the least some positive cash-flow, and on the other hand some companies have vanished entirely. With respect to 1989, three new hatcheries and two more integrated-companies have appeared, but 10 companies of feeding have folded, with final results of 5 fewer companies than the previous year.

Tables XVI and XVII states the fish, crustacean and molluscs in aquaculture production for 1985 and the foreseen results for the Plan 1991-1995.

ACTUAL AND FUTURE PRODUCTION OF FISH AND CRUSTACEANS IN MARINE AQUACULTURE						
Species	Production in 1985 (mT)	Production Plan to 1991 (mT)*	Forecast Production in 1995 (mT)**	Speed-up by optimization of facilities in 1991	Speed-up by new facilities or improvement in 1995	Total increment
FISH						
Turbot	40	993	4700	953	3707	4660
Bass	29	761	6000	732	5239	5971
Goldbream	127	1105	7500	978	6395	7373
Mugilidae	-	-	3000	-	3000	3000
Garrick	13	100	1000	87	900	987
Sole	-	-	500	-	500	500
Tunae	38	38	600	0	562	562
Eel	20	187	2000	167	1813	1980
Salmon	150	150	3500	0	3350	3350
Trout	-	-	1000	-	1000	1000
CRUSTACEANS						
Shrimp	16	738	4500	722	3762	4484
Prawn	40	402	410	362	8	370
Red crab	-	-	2000	-	2000	2000
"Artemia salina"	-	-	11	-	11	11
TOTAL	473	4474	36721	4001	32247	36248

* Include production in facilities runing or in construction
** Include speed-up in facilities actually runing, and production in new facilities or modernization under the Programme 1987-1991

Source: Secretaria General de Pesca (Madrid)

TABLE XVI

ACTUAL AND FUTURE PRODUCTION OF MOLLUSCS IN MARINE AQUACULTURE						
Species	Production in 1985 (mT)	Production Plan to 1991 (*) (mT)	Forecast Production in 1995 (mT) (**)	Speed-up by optimization of facilities in 1991	Speed-up by new facilities or improvement in 1995	Total increment
MOLLUSCS						
Clams	706	4896	40000	4190	35104	39294
Oysters	3164	9498	17500	6334	8002	14336
Mussels	245645 (1) 300000 (2)	310690	315000	10690 (3)	4310 (3)	15000 (3)
Striped venus		100	2000	100	1900	2000
Wedge shell	-	100	500	100	400	500
"Tellerina"	-	-	500	-	500	500
Wart venus shell	5.8	10.2	50	4.4	39.8	44.2
Scallop	150	150	2000	0	1850	1850
TOTALS	249671 (1) 304026 (2)	325444	377550	21418.4	52105.8	73524.8

(1) Production controlled by statistics. (2) Actual production estimate. (3) Speed-up in the Mediterranean area.
(*) It includes the production in facilities being built actually.
(**) It includes production increment in actually runing facilities, and production in other facilities included in the Programme 1987-1991.

TABLE XVII

Source: Secretaria General de Pesca (Madrid)

The gilthead seabream was the most promising species from short to medium term, with a production that oscillated between 1,000 mT in 1989 to 2,000 in 1990. In 1995, 7,500 mT is projected as possible.

The seabass maintains its growth, surpassed only by the gilthead seabream, with a production of some 1,500 mT in 1989, and some 2.000 in 1990, with a possible estimate of some 5,000 mT for 1995.

The production of brill for cultivation, did not exceed 300 mT in 1989, and it was about 400 mT in 1990. It does not seem probable that the projected 4,700 mT will be reached in 1995.

The increase in clam production is slow but significant; only the integral cultivation (without taking into account the semicultured production of fish nurseries), the production went from 600 mT in 1986, to about 1,700 in 1991. In any case, clam production in Spain is low.

With respect to the production of juveniles (alevines) in Spain, evolution during the period 1986-1990 has been the following:

Mediterranean marine juveniles production (k uds)

	1986		1987		1988		1989		1990	
	España	Europa	España	Europa	España	Europa	España	Europa	España	Europa
Turbot	48	178	232	412	170	650	300	1.210	400	1.600
Bream	720		1.475	4.805	2.810	7.110	8.150	15.400	14.000	30.650
Bass	30		40	7.610	58	8.778	20	14.555	50	20.490
Oyster	36.240	120.000	5.680	20.000	8.360	130.000	12.250	140.000	15.000	150.000
Clams	109.000	250.000	205.000	375.000	290.000	440.000	250.000	400.000	230.000	400.000

Table XVIII
Source: FROM

Despite these figures, the problems of aquaculture have remained the same for the past few years, to which one must add:

- the new Coastal Law has affected negatively the entire Spanish coastline, and especially in the South Atlantic coast, where production has clearly been reduced as a consequence of this Law.
- The new Italian clam, that has upset the clam market, and has had a very negative impact on the producers of that species.
- It seems that in Spain products of aquaculture have found some dangerous enemies in the traditional wholesalers of the fishery sector, accustomed to large profits from the allocation of fresh fish, as such merchandise is perishable. As aquaculture can guarantee its products to a certain date and at an exact price known by all, the profit margin for wholesalers is smaller, and it seems that among them there are certain efforts to discredit aquaculture products.
- The lack of commercial experience of the producers. This sector lacks qualified managers. Aquacultural companies in various Spanish regions have ultimately gone bankrupt due mainly to lack of credit support from the Community, state, and regional governments, a lack of capital investment, and the instability of the market.
- Limited biological knowledge cannot be resolved by insufficient investigation lacking priorities, and unable to solve the real problems.

5. PROCESSING SECTOR OF FISHING AND AQUACULTURE PRODUCTS.

5.1. SOCIO-ECONOMIC IMPORTANCE OF THE SECTOR.

One of the important objectives of the Regulation and Organization Fund of the Market for Fishing and Agricultural Products (FROM), and of the EEC is to create a minimal infrastructure that permits "value adding" to fishing products in the first step of the commercial process, through the help of the Producer Organizations. This measure intends that the shipowners of fishing vessels are put in charge of the first transformation of its products.

During 1990, the FROM, within the commercialization and transformation program of the first sale, approved 12 projects of various producer organizations, for a value of 408.5 million pesetas, of which 117 are from the help of the EAGGF (European Agricultural Guidance and Guarantee Fund), 106 million from State aid, and the rest from cargo revenue of the companies.

During the period 1986-1990, producer organizations presented 48 projects, of which 38 were approved, for a total amount of 5,061 million, of which EAGGF provides 22%, and the State 14.6%. In the Mediterranean region, 14.9% was given to Catalonian companies, 14% to Andalusia, 7% to Valencia and 0.3% to the Balearic Islands.

With respect to the industrialization of products, as with the final or retail selling, the companies of the transformation sector are found dispersed throughout the national territory: those of preserves, semipreserves, salting and smoking are found in the coastal regions, and the retail companies throughout the territory of Spain.

This sector is of great importance, since it transforms some products for whose manufacture a great deal of labor is required. Direct employment generates over 46,000 work posts, and the related employment reaches 200,000.

ELLABORATION INDUSTRIES

SOCIO-ECONOMIC RELEVANCE

	No INDUSTRIES	EMPLOYEES	OUTPUT (mT)	VALUE (Mill.Pts)
PRESERVES	199	38753	200000	90000
ELLABORATION INDUSTRIES	248	8000	280000	164750
TOTAL	447	46753	480000	254750

Table XIX
Source: FROM.

5.2. PRODUCTION.

5.2.1. Sub-sector of fish and mollusc preserves, and semipreserves of anchovies.

Its production has diminished from 210,000 mT in 1980, to 198,889 in 1988, though its value passed in this period from 43,700 million pesetas to 90,338 million.

In 1989, its geographic allocation was the following:

GALICIA	122,318 mT.
CANTABRIA	10,189 mT.
ASTURIAS	2,570 mT.
ANDALUSIA	13,492 mT.
COUNTRY BASQUE	22,000 mT.
REST OF SPAIN	29,431 mT.

Of 199 existing companies Andalusia has 19, with a small production capacity (14,741 mT from the subsector's total of 350.000 mT), and Catalonia only 8 companies.

5.2.2. Subsector of smoked and salted semipreserves.

Of 248 companies existing in Spain, Andalusia has 33, with an acceptable production, Catalonia has 50, Murcia has 23, and Valencia about 30. Almost all of these have their own market network with salaried staff, are occasionally supplemented by representatives and exclusive whole-salers.

5.2.3. Objectives and investment in the sector.

Preserves subsector and semi-preserves 1990-1994:
(Million pesetas)

Installation of new companies	2,242.5
Storage of prime materials	1,614.3
Manufacture and packaging	3,201.8
Storage of manufactured products	1,630.4
Allocation and commercialization	619.2
Computerization	226.1
Quality and hygiene control	203.1
Byproducts utilization	91.4
TOTAL	9,829.2

For these investments, high-priority will be given to Objective I areas, with a total of 6,116.2 million awarded, to be divided among Andalusia, Murcia, Valencia and Ceuta and Melilla.

Subsector of manufactured sea products during the period 1990-1994:
(Million pesetas)

New companies installation	2,705.2
Matters storage premiums	4,823.9
Manufacture and packaging	7,036.1
Storage of packaged products	7,180.6
Allocation and commercialization	4,832.1
Computerization	697.6
Quality and hygiene control	241.3
Byproducts utilization	10.1
TOTAL	27,556.9

Of that total, 20,774.1 million pesetas will be allocated for the regions pertaining to the Objective Area I, among which are Andalusia, Murcia, Valencia, Ceuta and Melilla.

The financial means which the State provides are determined in Spain by the Royal decree 1462/1986 of 13th July, 1986 which encourages the improvement of transformation and commercialization conditions of agriculture and fishery products, and Law 50/1985, of 23rd December 1985, which encourages regional incentives for the correction of economic imbalances between territories.

6 - MARKETING SECTOR FOR FISHERY AND AQUACULTURE PRODUCTS.

6.1. MARKETING OF FRESH PRODUCTS.

Fresh sea-products turn out to be 61.6 % of the total consumed in Spain. There are three types of trading centres or markets, for these products:

- first-stage markets
- central markets,
- and retail markets.

The first-stage markets are the areas of the fishing ports where the catches undergo the first sale. In Spain there are about 291 of these markets most of which belong to the Fishermen Brotherhood. Exporters and industrialists buy from these markets; the former send the recently purchased fish to other cities, and the latter to their manufacturing companies.

The exporters generally buy from a single market; however, in the South Mediterranean zone, about 25% buy from 3 or 4 different markets. As well as buying in the fish-markets, many exporters also buy from other places, or directly from the shipowners; exporters concentrate almost exclusively on molluscs, crustaceans and cephalopods, always fresh.

Each exporter supplies an average of 18 clients in Spain, 85% outside their province, though in the Mediterranean region this average is reduced to only 9 clients.

The central wholesalers markets consist of wholesale trading centres installed in large urban nuclei, generally property of the City Councils which supply to the retailers. They can be the traditional Central Markets, or those of the MERCASA Network, created by the National Company of that name in cooperation with the corresponding City Councils; these centers are usually installed in the outskirts of the cities.

The principal figure in the central markets is the wholesaler, who can buy directly from outside or from other wholesalers and sell there to the retailers or forward his purchases to wholesalers of other central markets. In Spain there are about 2,000 wholesalers, and more than half of them are also wholesaler provisioners, that is, they possess a sale post in the central market.

Wholesalers are supplied from the exporters mentioned previously with 45% of their purchases, 36.7% comes directly from the shipowners, and the rest from other suppliers. They sell the greater part to retailers, and the rest to other wholesalers as well as to restaurants, hotels, hospitals, etc.

Retail markets, which are not part of our study, could be:

- fish shops
- self-services
- supermarkets
- hypermarkets
- cooperative stores, etc.

(See Diagrams 1 and 2)

MARKETING CHANNELS FROM FISH "IN NATURA"

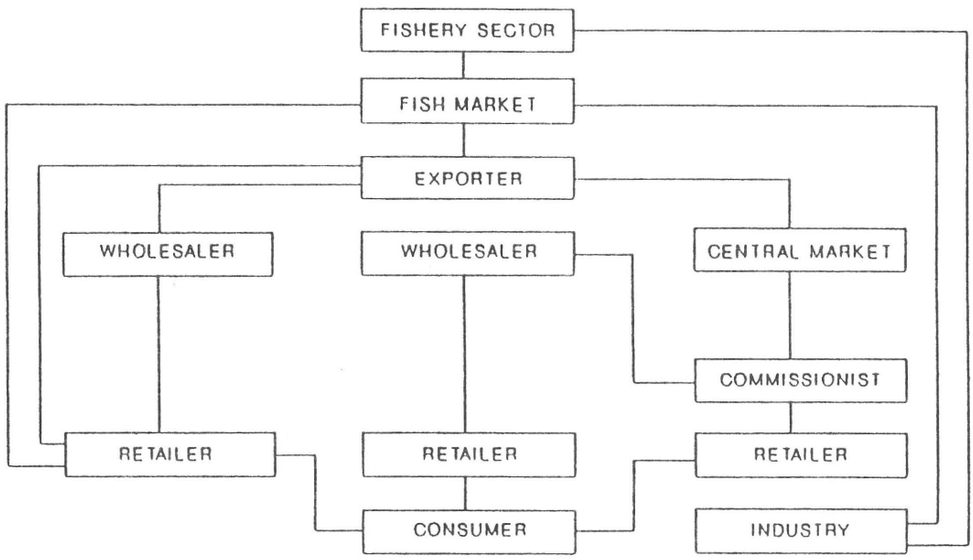
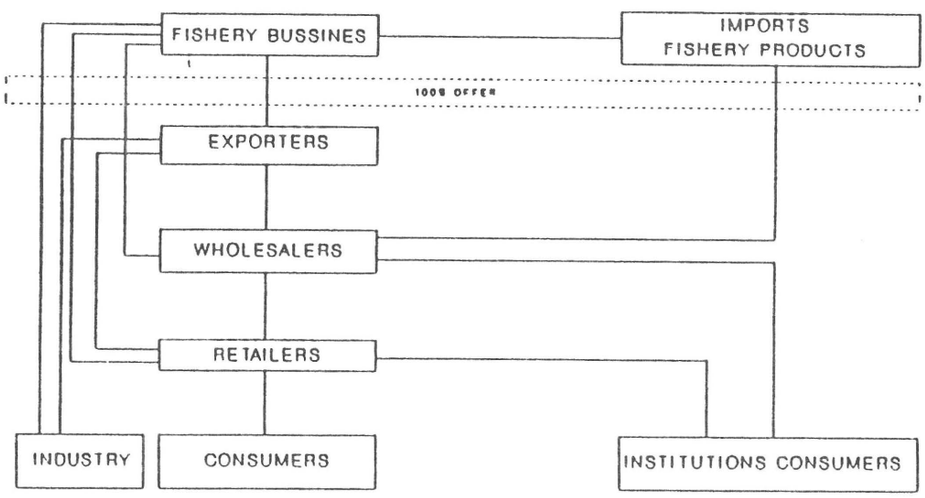


Diagram 1



DISTRIBUTION OF FRESH FISHING PRODUCTS

Diagram 2. Source: FROM

6.2. FROZEN PRODUCT MARKETING.

The commercialization of frozen products follow different routes from that of fresh fish, as shown by the following chart made by the State Secretariat of Commerce for a Marketing Study of Fishery Products:

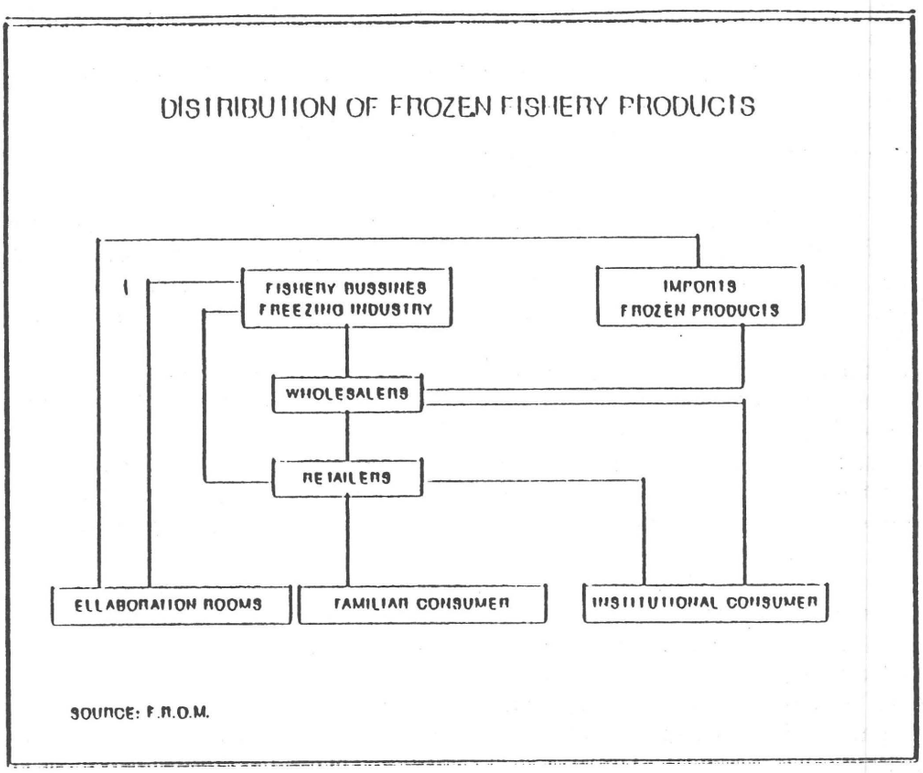


Diagram 3
Source: FROM

The four main frozen fishing products in Spain are tunny, cephalopods, hake and shellfish.

For frozen products, the large fishing companies have frequently established subsidiaries for their final wholesaler distribution with the occasional participation of the shipowning companies in the processing industries, so as not to leave the control of the market in other hands.

6.3. AQUACULTURE PRODUCT MARKETING.

The commercialization of aquaculture products varies also from that of fresh fish: first of all, they do not have to be auctioned in a fish-market, according to the Law 23/1983 of 25th June; that allows selling them directly from the production facilities to the local retail markets, hospitals, hotels, etc.

The Organization of Marine Cultivation Producers (APROMAR), has planned a market strategy for the future to avoid an excess of supply slumping prices as well as a trade organization project in order to bid jointly.

Some exporters mentioned earlier, and traditional wholesalers accustomed to the control and to the abundant earnings of the fresh fish market, have on

occasion tried to discredit the products of aquaculture, over which they have no control.

6.4. FISHING PORTS AND THEIR FISH MARKETS.

6.4.1. General statements.

The Spanish coast is divided into 105 maritime districts corresponding to 8 fishing regions; the fishing ports are classified into 4 groups according to the volume of fish landed:

- FIRST ORDER: landings > 35,000 mT/year; there are none in the Spanish Mediterranean area.
- SECOND ORDER: landings between 15,000 and 35,000 mT/year.
- THIRD ORDER: landings between 5,000 and 15,000 mT/year.
- FOURTH ORDER: landings < 5,000 mT/year.

There are 293 fish-markets in these ports. The amount of equipment and the state of their infrastructures, varies greatly from one port to another; electricity services, water, telephone, weighing services exist in most fish-markets, container warehouses in about 76 and fishing gear and supply stores in about 65.

To improve infrastructures and meet the needs of the markets, an investment of 15,001.7 million pesetas is forecast for the next five years to be distributed among all the Autonomous Regions. 6,978.8 million pesetas will be assigned for the improvement of the fish-markets and auxiliary facilities, 4,054.5 million pesetas for the refridgeration facilities of the fish-markets, 3,491.1 millions for warehouses to help to improve marketing and 1,377.3 million pesetas for the computerization of the fish-markets.

The fish-markets of the ports included in Zone I and among them those of Andalusia, Murcia, Valencia, Ceuta and Melilla, will obtain 10,616.5 million of those forecast which represents 70% of the total; the remaining 30% will be distributed amongst the other regions.

The following table shows the current situation of the fish-markets of the different Spanish Autonomous regions, stating the auxiliary services, productions and yields:

DENOMINATION		CATALONIA	VALENCIA	MURCIA	ANDALUSIA	BALEARICS
NUMBER OF MARKETS		19	20	4	26	5
SURFACE (M^2)		49,427	19,540	4,225	47,596	1,611
AVERAGE OUTPUT YEARS 1986-87-88	mT.	54,489	57,053	5,754	126,956.7	3,776.2
	Million Pts.	15,055.5	15,832	3,398	36,025.9	1,783
OCCUPANCY INDEX: mT/M^2		4.1	2.9	1.4	2.7	2.3
PRODUCTIVE RATIO: PTS/KG		276.3	277.5	595.5	283.8	472.2
AUXILIAR WAREHOUSES	CASES	5	14	5	15	4
	GEAR	12	4	3	10	2
ICE FACILITIES	ICE FACTORY	11	12	5	20	5
	ICE ROOM	15	12	5	16	5
	FREEZE ROOM	0	0	0	4	0

TABLE XX. Source FROM.

In the inland aquaculture, trout production is carried out in 200 piscicultural centers, giving direct employment to 210 technically qualified personnel and 1,120 unqualified workers.

These companies depend on the auxiliary industries with 6 factories of feeding stuffs which produce 31,000 mT, and 1 of packaging crates with a 5 kgs. capacity.

The Plan for the Future of the Sector intends to guarantee the future of these exploitations, currently with serious difficulties. For the improvement of inland aquaculture marketing for the period 1990-1994, the anticipated investments are 1,080 million pesetas, of which 550 are allocated to the regions of Zone I.

In marine aquaculture for fish and crustaceans, there are roughly 120 companies, of which 66 are in operation and the rest are mere projects. The aid investments foreseen for the period 1990-1994, are 3,140 million pesetas, from which 2,213.73 correspond to Zone I.

With regard to bivalve mollusks cultivation, the mussel sector which produces 200,000 mT and about 3,500 trays, constitutes 50% of the world output. 96% of the national production corresponds to Galicia, and 4% to the Mediterranean area, mainly to the delta of the Ebro river in Catalonia.

About 540 million pesetas will be set aside for the construction of warehouses.

The oyster sector has an output of some 3,200 mT; almost all of it is based in Galicia. The Japanese oyster (Crasostea jigs), and to a lesser degree the flat oyster (Ostrea edulis) are cultivated in the Mediterranean. The Associated Producers of "Frutos del Mar" organization (OPAFMAR) and other associations intend to increase their production.

They employ 40 people and it is expected that within a short period this number will increase to 150 industrial workers and 10 office workers.

The investment foreseen in this five year period is assigned to the handling and packaging, with 160 million pesetas and another 42.4 million to the cleansing process.

The National investment Plan for the period 1990-1994, for improving facilities and equipment for the cultivation of bivalves, has a total investment of 6,243.1 million pesetas, 4,927 of which is allocated to Zone I.

With regards to the MERCAS, Andalusia has 2, Catalonia 1, Murcia 1 and the Valencian Community has another. A total of 172 wholesalers and 1,437 employees work there.

The investment forecasts in the final distribution or delivery sector are 15,746.7 million pesetas, of which a 64.1 % will be invested in Zone I.

9,070.7 million pesetas are allocated to newly created distribution companies; 3,386 million for modernizing the wholesalers posts in the MERCAS. 1,564 million for creating new posts there and 945 million for the reform and enlargement of the existing MERCAS.

6.4.2. Spanish participation in the Community Aids.

Next we will summarize in two Tables the aid agreed upon by the EEC for the State members, in port equipment and for the entire fishery sector.

NATIONAL PLAN OF INVESTMENTS
GENERAL SUMMARY - PERIOD 1990-94 - PROCESSING AND MARKETING

DESIGNATION	ZONE OBJECTIVE I	REST SPAIN	TOTAL
PROCESSING	26,890.3	10,505.8	37,396.1
MARKETING	30,315.13	17,790.97	48,106.1
TOTAL	57,205.43	28,296.77	85,502.2

OBJECTIVE I: Andalusia, Asturias, Canaries, Castilla-León, Castilla-La Mancha, Extremadura, Galicia, Murcia, Valencia, Ceuta and Melilla.

Table XXI. Source: FROM

NATIONAL PLAN OF INVESTMENTS-PERIOD 1990-1994 (million pesetas)
MARKETING-ZONE OBJECTIVE I

DESIGNATION	ZONE I	REST SPAIN	TOTAL
FISH-MARKETS AND DEPENDENT FACILITIES	10,616.5	4,385.2	15,001.7
AQUACULTURE	7,690.73	2,772.37	10,463.1
MARKETING COLD NETWORK	688.5	585.9	1,273.4
WHOLESALER'S MARKETING IN ORIGIN	1,232.1	4,389.1	5,621.2
WHOLESALER'S MARKETING IN DESTINATION	10,087.3	5,659.4	15,746.7
TOTAL	30,315.13	17,790.97	48,106.1

OBJECTIVE I: Andalusia, Asturias, Canarias, Castilla-León, Castilla-La Mancha, Extremadura, Galicia, Murcia, Valencia, Ceuta and Melilla.

Table XXII. Source: FROM

5.5.AUXILIARY INDUSTRY OF THE SECTOR

Areas such as Barcelona, the Basque Country, or the area of central Spain have abundant auxiliary industries. For each of the areas considered, further details will be given regarding the companies devoted to Auxiliary Industry of the Naval Construction located in the area.

In order to group these companies into homogeneous occupational groups, functional classification of Auxiliary Industry has been established, of which we give the total number of companies in each group, according to the bibliographical sources consulted and to the data of the Ships Inspection, an organization which controls the quality of materials and naval construction in Spain.

In any case, taking into account the country's poor statistical information, we believe that the lists extracted from such sources are not inclusive

of all that currently exist in the auxiliary industry, but they give an adequate description of the allocation characteristics of that activity in Spain.

Nevertheless, the stipulation of a possible reduction of the Mediterranean fishing fleet on such companies, is an impossible task in practice and under the conditions of the present study: many companies in the central area provide for or do repairs for the Mediterranean fishing fleet, as do the companies of the Atlantic Spanish coast which, because they possess the greater fishing fleet, have established the best factories and materials of the sector.

a) EQUIPMENT AND PROPULSION FACILITIES

Engine propelling - steam turbines - principal boilers - reductors - inverse reductors - shaft lines - propellers

Total companies in the sector 45

b) EQUIPMENT FOR ENGINE ROOM - MANIPULATION OF FLUIDS

Boilers - burning - compressors and ignition bottles - purification pumps - bilge separators - heat interchangers - fresh water generators - distilling plants - valves and pipes.

Total of companies in the sector 126

c) DECK EQUIPMENT

Steering engines - capstan - winches - windlasses - deck grains - fishing winches - anchors - cables - deck accessories - safety equipment.

Total companies in the sector 41

d) ELEMENTS OF HULL - RIGGING AND MASTING

Ladders and landing plates - hatch covers - cables - metallic doors - gaps - light ports - accessories and fittings - derricks - masts - ropes - nets and fishing gears - equipment for handling the fish.

Total of companies in the sector 51

e) COMMUNICATIONS - NAVIGATION - AUTOMATIZATION -SPECIALIZED INSTALLATIONS.

Interior communications - radiotelegraphy - radiotelephonics - nautical instruments - navigational aids - automation and control - fire-fighting equipment - special facilities and services.

Total of companies in the sector 39

f) ELECTRICAL EQUIPMENT - LIGHTING

Electric power equipment - dinamos - alternators - motors - batteries - transformers - groups ward - leonard - switchboards - conductors - apparatus - measurement instruments - insulators - lighting equipment.

Total of companies in the sector 48

g) REFRIDGERATION - HABITABILITY

Refridgerating plants - air conditioners - insulation - paint - ventillators. Cathodic protection - checkerboards - pavements - doors - habitability

Total companies in the sector 64

h) IRON AND STEEL INDUSTRY

Steel plates - profiles - forging - iron smelting - smelting of steel to carbon - smelting of special steels - smelting of non-iron metals

Total industries in the sector 15

The total of industries thus quantified are 429 different companies.

SECOND PART

1 - COMMON MEASURES FOR THE MARITIME FISHING OF THE MEDITERRANEAN

At the adoption in 1983 of the basic arrangements of a Common Fisheries Policy, it was decided not to establish the principal measures of control for the Mediterranean.

However, in the Mediterranean, the market and structure legislations are applicable; the Regulation (EEC) no 170/83, on preservation and management of fishery resources, and those which depend on it, constitute a legal base for Community measures, according to the Final Work Document EC (90) 1136, OUTLINE OF A COMMON FISHERIES SYSTEM IN THE MEDITERRANEAN, which will serve as a general guideline in this part of our study.

1.1. STAGES AND CONSTITUTIVE MEANS OF COMMON RULE

1.1.1. Legislation Scope.

The harmonization of fishing legislation in the Member Countries of the Mediterranean, does not present, in our judgement, problems for trawler and seiner fleets. However, artisanal fishing, with a great diversity of gears and very specific local situations, we believe requires a punctual treatment for each case and circumstance.

When outlining the development of a defense policy of the resources in the Mediterranean, sport fishing has a significant importance. The great number of sport fishing and pleasure fishing, and the global volume of its landings, in areas such as the Balearic islands and various areas on the Spanish Mediterranean coast, necessitate the application of restrictions to this type of fishing as well.

On the other hand, we understand that the engine power in artisanal fishing boats should not be taken into consideration, since it increases the safety of its fishing without affecting the total of its captures. It is the size of those captures and the closed seasons which should be controlled.

1.1.2. Implementation of fishing jurisdiction beyond the current jurisdictional waters.

Extending the jurisdiction to 200 miles, would lead to sovereignty conflicts with the neighboring coastal States; on the other hand, the characteristics of the Spanish continental platform in the Mediterranean, which in general is very narrow, permit control of the fishing-grounds with enlargements that would result in the receding of median lines with other countries. Those enlargements would be very convenient in certain cases, in order to avoid Third Country abuses.

1.1.3. The designing of a model for the management and conservation of resources.

The specific circumstances of different fishing-grounds, and the multiplicity of gears and tackle used, does not make it convenient to establish a common regulation for all the Mediterranean, by means of a standard model.

The operational strategy will have to consider the effort affecting each particular fishing resource, and determine the measures in accordance with the circumstances and the tackle used in this area.

2.- GLOBAL SITUATION.

2.1. GLOBAL ASPECTS IN TRAWLING FISHING.

Over-exploitation can be asserted in the case of the fishing of demersal species by trawling gear. In spite of this, the total captures were consistently increased until 1980, as we have already seen; the capacity of vessels and trawling gears has increased in a parallel manner, a process that has accelerated progressively. The number of vessels did not vary much, but on the other hand, the total tonnage of trawling vessels and their total power increased.

The measures adopted to limit the growth of the fishing effort of the trawlers have attempted to limit fishing time: it is forbidden to fish on Saturday, there has been a progressive decrease in the authorized time at sea, etc.

These measures were not simultaneously adopted in all the regions.

As an example of this, the "Plan Castellon" established a series of limitations upon the activity of the trawling fleet, with effective results, in spite of the fact that the recommended net mesh was not always used.

The limitation of the time at sea, together with the progressive increase in tonnage and power of the trawlers introduced, especially in the narrow, sinuous and rugged platform areas, is a new factor of great importance: when the trawlers leave their base port in the mornings, the fastest and most powerful are at the forefront, and their impact on the school in the fishing-grounds is greater than that of those which follow it, who find the school very diminished. This is what is designated as "competition between boats".

The situation has two consequences: the first is a certain although momentary decrease of the fishing effort, since the trawlers that arrive in second place exert a pressure that is not compensated by the catch obtained; the second consequence, on the contrary, is negative, since the shipowners are forced to increase the speed-power of their vessels in order to obtain the best posts, with a corresponding increase in the global fishing effort.

Evidently, this situation does not occur in the broad continental platform areas, such as the Castellon, where the smoothness and cleanliness of the marine bottoms do not necessitate this type of competition, since there is room for all fishing.

During the last few years there has been an attempt to halt the growth of tonnage-power, establishing certain limits of power, which can not exceed 500 HP. But there are still a few trawlers with engine power of over 500 HP, and some that exceed 1000 HP, and while they can fish in remote waters, ships of lesser engine power and the greater part of the entire fleet are limited by the time at sea allowed. They have been forced to fish in nearby areas or shallow waters, and these areas thus suffer the consequences of overexploitation.

Finally we will indicate that technical progress - echo-sounders, GPS, radars, improvements in the fishing methods, etc.- have increased the actual capacity of capture.

Consequently, although theoretically fishing capacity has barely increased, real capacity has significantly increased.

In already outdated experiments, it was discovered that with the simple introduction of the echo - sounder, there was an increase in capacity and in the fishing effort. The result of those technological advances has been an apparent increase and/or stabilization of the total captures, due not so much to a real increase in the stocks, as to the fact that some of them are exploited more effectively.

Thus, species formerly free to live at great depths, can now be fished, such as the deep-water shrimps, or the employment of lines for hake fishing at

depths of 800 meters or more, etc. The use of trawling gears of great vertical span has resulted in the more effective capture of species such as pandoras, sea breams, etc., that live near the bottom but at a certain height from it.

An analysis of the fish landings by administrative divisions, taking the years 1985 and 1989 as references, shows the following significant characteristics:

- Among the species living at greater depths between the end of the platform and the slope, the blue whiting exists in very narrow platforms, as well as deep-water shrimp.
- In other areas the principal species is the Norway lobster, thanks, certainly, to the non-existence of a fleet adapted to the fishing of that species.
- Together with the blue whiting is the hake, which is accompanied in wide platforms by the mire red mullet.
- In some areas, the sea bream occupies a highlighted place among the deep-water species of the platform.

Thus, the more or less marked presence of certain species, is closely related to the geomorphological structure, and to the functional structure of the trawling fleet. In this sense there is clearly a positive variation from the south of the Spanish Mediterranean Coast, toward the north, where the better vessels are found. This variation was influenced by the fact that the large consumer markets of Catalonia and Valencia are located in the north and central zones.

2.2.- GLOBAL ESTIMATION OF TRAWLER CAPTURES AND FISHING EFFORTS.

From the global and general point of view, the relationship between the capture and the fishing effort clearly indicates a strong case of overfishing, since to some global efforts of HP, or GRT, the corresponding capture is clearly inferior to that which would be expected at even greater reductions: those which correspond to the maximum sustainable yield estimated globally at mT/year.

However, one must to take into consideration an important series of factors, before making a decision:

1- The influence of the geomorphological structure of the bottom; a winding and narrow platform, a sloped or a wide platform are not the same.

2- The importance of matters such as the blue whiting and deep-water shrimp, whose ecological conditions prevent, for example, the massive capture of juveniles.

3- The existence of other species, such as rock octopuses, whose behaviour and formation of schools pose certain difficulties and limitations in their capture.

4- The ecological - economical factor, the species fished by the trawlers are of great commercial value, and there is a great coastal market of tourism.

Also taking into account these factors for possible limitations, it is essential that the means of control over trawlings at minimum depths be severe in order to prevent massive capture of juveniles in a great number of species, in particular the Red Mire Mullet.

On the other hand, there will be rules regarding the maintenance of a minimum mesh that must in no case be exceeded.

There will be a limit to the amount of fishing of juvenile hake (weakfish) and beardfish, intensively exploited in the juvenile phase when they appear in great concentrations on the platform, in particular during the spring and summer seasons. Because of this, there will be drastic limitations on the fishing effort, since it is not possible to consider the enlargement of the current mesh

(38 and 40 mm. in diagonal with stretched mesh).

From all of this we can see the need to limit the effort by the usual means -limitation of power, fishing time, obligatory closed seasons, etc. - but also of adapting that limitation to the circumstances of each place.

A regulation that typifies the permitted activities to the various types of trawlers is essential: the most powerful trawlers would be allowed at the deepest part of the continental platform, and to exploit the slope; the average tonnage vessels would be allowed to exploit the platform at middle depths, where the mire red mullet is found, the beard, squid, the hakes and the young beardfish, with the indicated limitations. The small trawlers, modernized, would be devoted to the exploitation of the areas with lesser depth, inside the established limits, or for the capture of species with special habits, such as rock red mullets, rock octopus, etc.

In abstract: the fishery trawling in the Mediterranean should be subjected to a general regulation that establishes a certain number of limitations, always taking into account the particular places and the principal characteristics of the main exploited species.

On the other hand, the classification established by the General Fisheries Council for the Mediterranean (FAO), is very well adapted to these divisions, and we will now refer to this classification.

2.3. FISHING GROUND SITUATION.

2.3.1.- DIVISION 37-1-1, (Catalonia):

We will include in this area, in addition to Catalonia, the wide platform extending from Cape Salou to the Castellon Coast.

With respect to the fleet of the above delimited area, 20% of the total are trawlers, with 66% of the GRT, 78% of HP, and 34% of the crew members. The seiner fleet has only 10% of the number of ships, 17% of the GRT, 12% of the HP, and 30% of the crew members.

Seiners and trawlers are the two types of fishing ships that we will study, since they are the principal source of problems on the Spanish Mediterranean Coast.

There is a notable difference between both trawling and seiner fleets: the former has visibly increased in number, GRT and HP, as well as in technological progress; the latter has remained more stable, and the increase in capture is mainly due to the fishing in this area of a great number of seiners coming from the southern region of the Spanish Mediterranean Coast, in particular Almeria and Adra.

The average values for both types of fishing activity are the following: trawling, 45 GRT, 300 HP and 5-6 crew members; in the last few years these figures have become: 44.8 GRT, 302.9 HP and 5.3 crew members (6.33 for the trawlers > 12m of length, and 2.66 for those smaller than 12 meters). But the fact that the average engine power does not exceed 500 HP, the maximum permitted limit, is not due to the lack of trawlers of greater power, which do exist, but to the survival of a great number of small trawlers, which are all very old.

If within this concrete area, the power of trawlers between northern and southern zones is compared, it is seen that in the former zone, increases in its average value are related to increases in the fishing effort.

On the other hand, the total power of seiners was increasing up to 1986, beginning thereafter to decrease slightly, mainly in the southern zone.

With respect to species, captures have varied, generally following the variations corresponding to the blue whiting and the deep-water shrimp. The CPUE (capture/ship) remains constant up to approximately 1964, then experiencing a

progressive increase, that reaches its maximum value at the begining of 1980. Thereafter it keeps that stationary value, with slight variations, certainly due to the fact that they have exceeded the maximum sustainable capture. The pressure of the high economic value of the fish in this area must be taken into account when imposing coercive measures to regulate the fishing effort.

The examination of the global effort performed in the Catalonia area, expressed in total HP, shows a rather stationary situation; however, considering its partial areas, we find notable increases in the north zone, stability in the centre, and slight decreases from Barcelona to River Ebro. The area of San Carlos de la Rápita again shows a strong increase.

In 1990, the total effort has been about 130,000 HP, of which 37,900 are performed in the wide platform of Castellon (from Salou to the Valencia province); On the contrary, the greater increase has been in the northern zone, from Blanes to the French frontier, thanks to the development of new, deeper and more remote fishing-grounds. As already stated, this is due not only to greater GRT and power, but also to technological progress.

Comparing the variations of the CPUE (capture/ship), **Graphic 6a**, we see that the maximum value corresponds to 1980. From that moment on, the captures and the CPUE index tend to be stationary; estimating that the total capture obtained by the trawling fleet is around the average value of the available data (up to 1986), the present engine power calculated as 128,400 HP.

2.3.2.- DIVISION 37-1-12 AND 37-1-13:

They are studied together as one group since the available data are grouped, although the FAO division correspond better to the actual situation.

The fishery as a whole is characterized by the abundance of pelagic species, especially sardine and anchovy, characteristics of the wide Castellón platform and of the southern part of the area.

Special attention to trawler fishing is necessary, because of its greater influence on the stability of fishing resources. Experience seems to indicate that the pelagic stocks depend more on good recruitments than on the direct action of fishing, in the case where this pressure is not very high, such as seems to occur at the present time.

The extent of the Castellón platform and the proximity of the Ibiza area, facilitate the development of fishing. For this area, the fishing power expressed in HP, has maintained a certain balance during the 80s, about 145,000 HP for the entire area; the maximum oscillation was presented in 1981, with 140.00 HP as minimal value; 149,900 HP in 1985, is a figure to that of 1990.

Comparably, a certain stagnation in total captures is observed between 12,500 mT in 1980 and 18,100 in 1982. The value estimated for 1990, about 15,000 mT., is found between both extremes. In **Graph 6b**, we observe that the corresponding curve, which has been drawn in an estimated manner from the available data, is very open, almost flat, which goes along with the stability mentioned.

As in the previous area, the maximum effort corresponds to the last few years, the captures being, however, below the possible maximum sustainable yield, corresponding to 144,000 HP, according to the available data.

On the other hand, one must mention that the special characteristics of the Valencian platform, especially as compared to the Castellon, allow an easy exploitation of juveniles, especially those living in shallow waters at a considerable distance from the coast. This situation has always been a serious hazard which facilitates the premature and massive destruction of the recruitment stock.

The study of the total CPUE (capture/ship), shows an important increase

from 1962, and another new increase at the end of the 70's, which then remains stationary. It is important to mention the strong expansion of the fishing power, concentrated mainly in in the previously discussed area of Catalonia, and in Valencia. Just as Catalonia was mainly influenced by high technology, Valencia has been influenced by the advantageous conditions of its platform, and by the proximity of Ibiza.

2.3.3.- DIVISION 37-1-4:

Includes the coast of Murcia, and part of Andalusia, up to Cape Gata.

In this area as well as in that of the rest of the Andalusian Mediterranean, there exists a permanent trend toward the decrease of trawler fishing, in regard to its total power, it goes from 20,900 HP in 1980, to 16,900 HP in 1990, decreasing gradually.

Comparably, it can be observed that beginning in 1974, when landings were about 2,500-3,300 mT., there has been a strong decrease which peaks in 1980. Analyzing **Graph 6f**, we see that there has been an increase in captures as a result of the arrival of a more powerful fleet. This constituted an initial success, but in the long run this pace of captures could not be maintained.

The average power of the trawlers of this Division is smaller than that of the previous, with the exception of the Port of Garrucha, where vessels practice slope fishing, especially the red deep-water shrimp. Consequently, it seems that a change in the fishing strategy would be expedient, especially in the continental platform, which, because it is very narrow, has not been able to recover from the action of a relatively important trawling fleet.

In this Division, the economic stimulus is less strong than in the previous.

2.3.4.- DIVISION 37-1-5:

Corresponds to the coast of Andalusia from the Cape of Gata to the Straits of Gibraltar. It also has a narrow continental platform, which is characterized by the existence of oceanographic streams that especially enrich the pelagic fisheries.

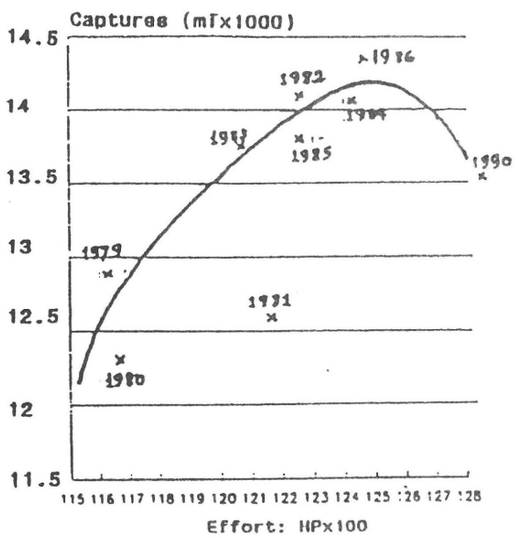
Graph 6d shows a sharply diminishing trend in the fishing effort in this case. The effort was somewhat higher than 80,000 HP in the period 1980 - 1982, having decreased to 58,600 in 1990. With respect to the captures, these have remained more stable, at about 25,000 mT. annually.

The dispersion of the available data prevents a sufficiently close estimation of a production model with meaningful results, which prevents the detection of trends with certainty.

It also involves a trawling fleet that acts principally on the continental platform and beginning of the slope, which, because of the narrowness of the platform, is very limited in its expansion possibilities, in spite of the relative abundance of blue whiting.

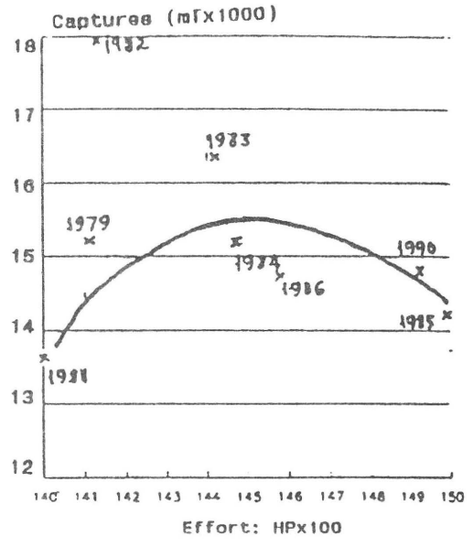
The above mentioned reasons, make the stimulus for new constructions very scarce, if not non-existent, and taking into account that the local market lacks the importance of that of the northern areas of the Spanish Mediterranean Coast. The scarce power of the trawlers of many ports of the area serves to corroborate this statement. Because of this, the possibility to reach the species of the slope, as in Catalonia, is very problematic under the current circumstances.

CATALONIA



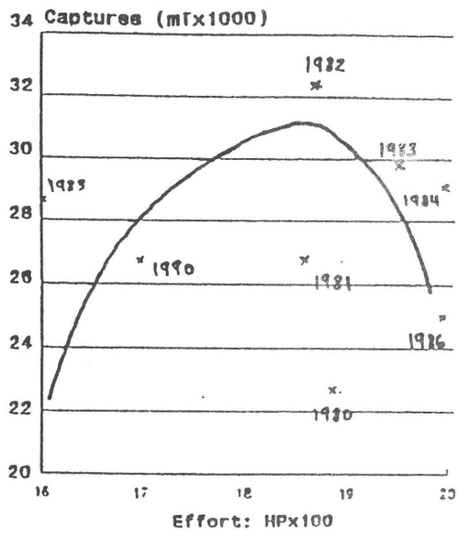
Graphic 6-a

VALENCIA



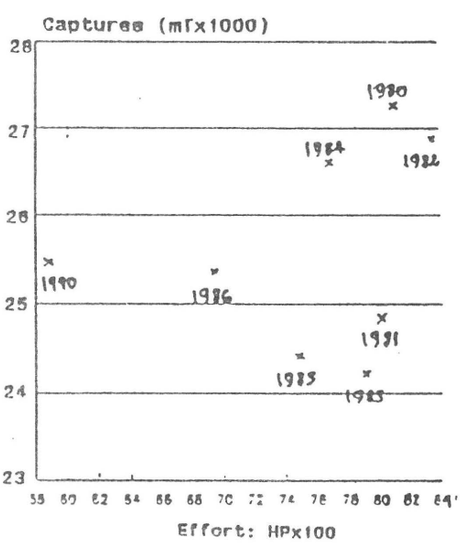
Graphic 6-b

BALEARICS



Graphic 6-c

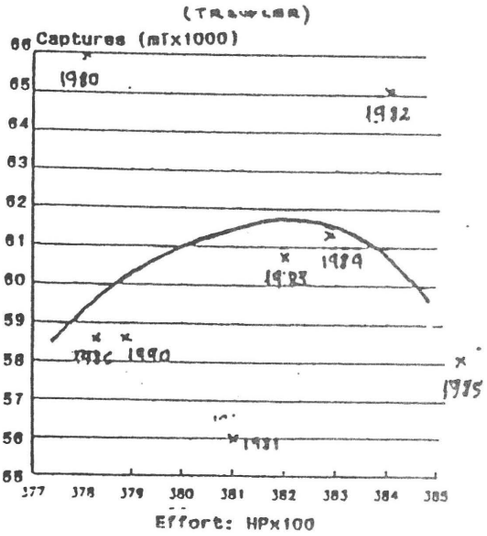
ANDALUSIA



Graphic 6-d

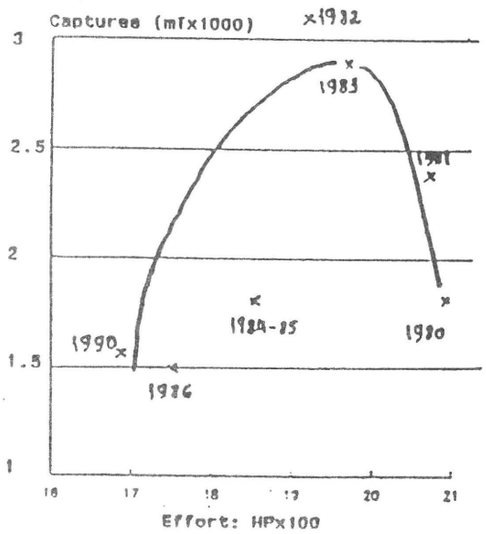
GLOBAL MEDITARRANEAN

(Trawler)



Graphic 6-e

VERA (MURCIA AND GRANADA)



Graphic 6-f

2.3.5.- DIVISION 37-1-6:

Corresponds to the Balearic Islands; the total power is greatly reduced, showing a slight increase from 1980 to 1984; it then decreases slightly until 1990. See **Graphic 6c.**

Curiously, in the years 1980, 1981 and 1982, the efforts and the behaviour of the captures were similar, with strong increases; afterwards, although the effort continues to increase, the captures show a clear trend toward reduction, especially in 1986, and the decrease of power until 1990, the increase has not been sufficient to recover the level of captures.

3 - COMPLEMENTARY AIDS, THROUGH EEC STRUCTURAL FUNDS.

3.1. INSTITUTIONAL FINANCING.

In the fishery sector institutional financing is very complex and varied, depending on whether it is produced through the EEC, the State or the Governments of the Autonomous Communities.

3.1.1. The European Economic Community.

EUROPEAN AGRICULTURAL GUIDANCE AND GUARANTEE FUND (EAGGF):

Guidance section (Reg 4256/88), for fishery:

- Measures to improve the marketing and processing of fishery products

THE EUROPEAN SOCIAL FUND:

According to the Treaty of Rome, its mission is to promote the occupational facilities and the professional and geographical mobility of the workers.

On the one hand it has as its objective the promotion of the adequate qualification of its workers, and on the other the development of occupational possibilities, with special attention to the integration of youth and disadvantaged workers.

Any private or public agent can request its help, which is always evaluated by the corresponding State. In Spain the authority designated to have control over this and to introduce proposals is the Ministry of Work and Social Afairs, through its Unit Administration of the European Social Fund.

THE EUROPEAN REGIONAL DEVELOPMENT FUND (ERDF, Operational Programmes):

Its principal assignment is to correct the regional imbalances of the Community, by means of multiannual actions, for the regions needing it.

Priority is given to investments and public actions for projects involving development, that constitute a coherent unit (integrated Development Programs or Integrated development Operations).

COMISSION REGULATION 4028/86

This EEC Regulation and subsequent refer to communitary economical support to improve the fishing sector and aquaculture in various fields:

- Restructuration and renewal of the fishing fleet.
- Updating the fishing fleet.
- Aquaculture develompent and coastal area conditioning.
- Experimental fishing.

- Temporary associations with third countries.
- Capacity adjustement (inmovilization, temporary or permanent).
- Fishing port facilities.
- Marketing prospects.

The EEC will finance up to 40% but the State member must also finance some amount.

ENVIREG:

The goal of this initiative is to improve the environment, and to increase economic development, and is directed mainly to coastal areas of disadvantaged regions of the Community. This community initiative has a budget of 800 million ECUS.

LEADER:

Initiative to encourage an integrated approach to rural development, outlining the problems from their origen.

These measures refer specifically to the stimulation of development, professional formation and aid to employment, to rural tourism, small companies, craftsmen, local services, and the commercialization of production.

An important aspect of LEADER is the utilization of new techniques of information and communication, which permits the highlighting of the capabilities of each local action group.

EUROFORM:

Initiative for the development of new qualifications, powers and employment opportunities. It replaced the programs FORCE, EUROTECNET, LEDA and ERGO, and is based on the remains of these programs. It has a budget of 300 million ECUS.

3.1.2. The State and the Autonomous Communities.

They contribute various important services and loans to Community aid.

3.1.2.1.- OFFICIAL BANK

Two official banks operate in Spain: BANCO DE CREDITO AGRICOLA (B.C.A. and BANCO DE CREDITO INDUSTRIAL (B.C.I.).

BCA used mainly for conversion and upgrading vessels up to 9 mts l.b.p. and fish markets through F.R.O.M. Agreements, aquaculture, shore installations and so on. In some cases the loans should be guaranteed by the Brotherhood. Fishing Licenses and fishing campaings.

BCI grants credit lines for fixed and circulating assets for the creation and improvement of industries. Especially in the fishing sector, the construction of fishing vessels of more than 9 mts l.b.p. modernization, renewal, energy saving and so on, fishing vessel equipment, auxiliary fishing industries, Fishing Rights. The loans are for 8 to 12 years with 2 years of grace.

3.1.2.2.- OFFICIAL INCENTIVES

Several national regulations to encourage business activity in depressed areas. Some areas classed as "high priority" areas can be subsidised up to 50% of the total investment, on the basis of creation of new jobs.

EEC, national and autonomic regulations subsidies the replacement of the fishing fleet, (cost conversion from bottom trawlers or seine fishing to another modality), vessel upgrading, improving safety, storage of captures, energy saving, new tecnologies and so.

EEC, and national goverment also subsidies the permanent cessation of activity (scrapping, export to third country) or the temporary laying-up of fishing vessels.

4.- THE INSTITUTIONAL FRAMEWORK AND THE ORGANIZATIONAL STRUCTURES OF THE FISHERY SECTOR IN SPAIN.

4.1. GENERAL OBSERVATIONS.

Before considering how to carry out the possible accompanying measures, which may help to resolve the social problems resulting from the action of the Common Fisheries Policy, it is appropriate to discuss briefly the institutional framework and the organizational structures of the Spanish Fishery Sector, within which it is essential to provide the necessary assistance.

4.2 ORGANIZATIONAL STRUCTURES OF THE SPANISH FISHERY SECTOR

By organizational structures, we mean those public and private corporations that operate in the sector; we will give a short review of these structures in Spain, in order to later be able to describe within that context the methods to follow to resolve the social problems resulting from the Common Fisheries Policy.

4.2.1. "Cofradias de Pescadores" (Fishermen's Brotherhood).

Shipowners and fishermen associations of fishing vessels whose tonnage is less than 150 GRT, operating in coastal, artisanal or littoral fishing. The majority of fishing vessels and crewmembers of the Spanish fishing fleet are involved.

Currently, there are (R.D. 670/1978, of 11 March) Public Corporations that act as Consultation and Cooperation Committees with the State Government; they have legal entity, autonomy of operation and their own property. They are financed by set dues from their members and by State aid in exchange for their collaboration in studies and technical services for the General Fishing Secretariat.

There has been an attempt to portray Brotherhoods as a Vertical Trade Union, residue of the era of dictatorship in Spain (see Mediterranean Andalusia), when actually this organization has existed for many centuries; the remuneration system by "shares", practically the only one in artisanal and coastal fishing, converts mere fishermen into virtual partners of the shipowners, and creates common goals for both shipowners and crew. On the other hand, in this fishing class, many shipowners are skippers of the ships, and their families are the crew members.

In Spain, worker memberships in trade unions is very scarce, which occasionally causes problems for social agreements. Furthermore, in the fishery sector, the number of syndicated workers is far lower than that of other sectors. In 1989, according to a survey done by CETEMAR, on Spain's fishery sector, 68% of Fishing Captains, 89% of skippers, 88% of naval engineers, 78% of fishermen and 92% of seamen do not belong to any type of union.

Consequently, only the Cofradias can currently act as adequate social interlocutors.

The work Document EC (90) 1136 Final, "Outline of a Common Fisheries System

in the Mediterranean", when it deals with the economic field in Section 4, refers to stock management, specifying that a policy of conservation could be guaranteed through organizations that join professional interests ("Cofradías" in Spain, the "Comite de L'Ordonnance de 1945" in France), to beneficiaries of a delegation of power representing the State.

The Fishermen Brotherhood in Spain, have a long experience in self-rule in the conservation of their fishing-grounds, since 1750. However, the enforcement of measures for their maintenance has always failed and must be passed into other hands to achieve more effective results.

In Spain there are 224 Brotherhoods, grouped in 21 Provincial Federations, two inter-federal and a National Federation.

4.2.2. Shipowner Associations.

Offshore and deep sea fleets are organized in the framework of the Law 147/1961 of 23 December, in different Shipowner Associations according to the fishing type.

4.2.3. Producer Organizations, OPPS.

In the fishery sector these Organizations were instituted in 1970s according to the Council Regulation no 2142/70 and are regulated by the Royal Decree 337/1986, introducing two problems:

- the convenience of converting or not converting the Brotherhood into Producer Organizations of coastal fishing, since the Trade Unions object to the Brotherhood because of the integration of shipowners and simple workers.
- the doubt is as to whether to give management power of the Producer Organizations to the State or to Autonomous governments.

The solution has been that Producer Organizations of coastal fishing have been constituted on the basis of the Brotherhood, and the power struggle is in the hands of the Constitutional Court.

4.2.4. Control of the markets.

Spain has been compelled to adjust in an urgent manner to the Community legislation on Producer Organizations, created in 1970, and reaching its full development thirteen years later with the growth of the "Blue Europe".

These organizations have been unevenly introduced amongst the various EEC State Members (See table XXIII).

The structure of the fishing market in Spain does not provide easy control for the fishermen over the fishing market. To achieve that would demand a detailed study of current marketing structures, focused with more creativity onto this objective.

The increase of fishing imports in Spain (already subjected to a secondary transformation) in order to compensate for the shortage of fishing in national waters, provides an added difficulty for the development of the country's processing industry.

4.3. THE INSTITUTIONAL FRAMEWORK.

4.3.1. State and Autonomous Management.

In Spain, fishery depends on the General Fisheries Secretariat, belonging to the Ministry of Agriculture, Fishery and Food. It has Delegations in all the

Autonomous Communities.

This Secretariat is arranged according to the flow-chart included in the following pages **(Diagram 7)**.

Each Autonomous Region in Spain, at the same time has law-making authority over the Management of Fisheries. We reproduce as an example the organizational flow chart of the Fishery Management of the Autonomy of Andalusia **(Diagram 8)**

4.3.2. Social Affairs.

For the Fishery sector, Social Affairs are channeled by means of the Social Marine Institute (ISM), dependant on the Ministry of Work and Social Affairs. The ISM is a Public Body on a Nation-wide basis, with legal entity.

To the ISM belongs the power of management, administration and recognition of the rights to services, among other rights, such as:

- health assistance
- training and professional promotion of the seamen.
- together with the National Employment Institute (INEM), and according to agreement nº 9 of the International Labour Organization, attends to unemployment services and the placement of the seamen.

To accomplish all this, the ISM has Central Services in Madrid, 25 Provincial Directions, 2 provincial Sub-bureaus, 109 local Directions and 18 administrative Offices, as well as a network of Seamen Clubs, in which are offered to the seamen all the services listed above.

On occasions, the local Director is also the Secretary of the Fishermen Brotherhood of a given place, or the Brotherhood has its office at the same location as the ISM.

FRANCE	Four Legal Models based on: * 1945 Ordinance (Professional Fishing Organisation). * 1901 Law (Association's Law) * 1967 Ordinance (Economical Interests groups). * 1947 Law (Cooperative Associations)
U.K.	* Under the "Industrial and Provident Societies Act" 1893 to 1961.
BELGUIM	* Only one non profit Association. Acts as non profit organization professional and fishing production organization.
IRELAND	* Two Cooperative Associations under "Industrial and Provident Societies Act" 1893 to 1971.
DUTCHLAND	* Two existing associations. Operating as a Cooperative Organizations.
ITALY	* Mostly of the Associations are Cooperative Limited Societies.

TABLE XXIII

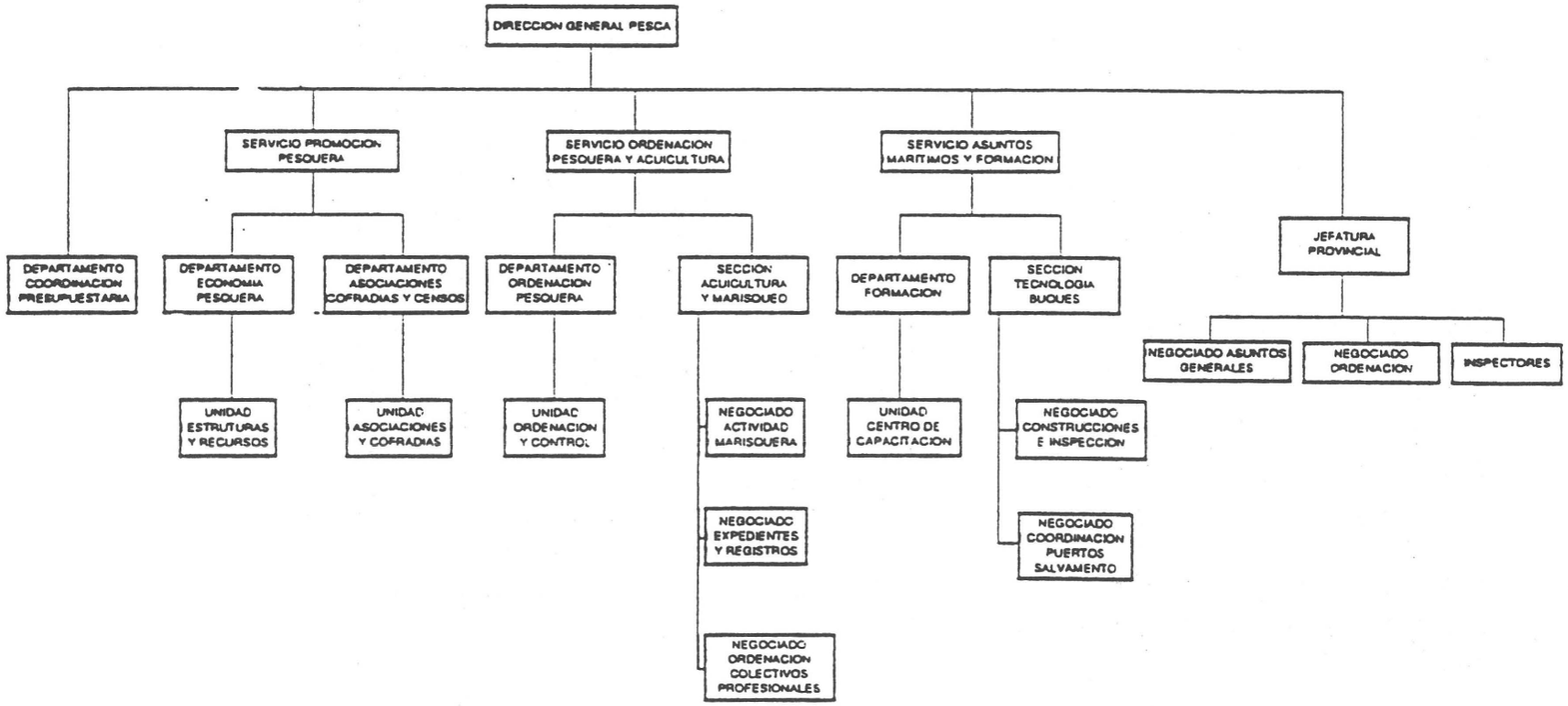

DIRECCION GENERAL PESCA
SERVICIO PROMOCION PESQUERA
SERVICIO ORDENACION PESQUERA Y ACUICULTURA
SERVICIO ASUNTOS MARITIMOS Y FORMACION
JEFATURA PROVINCIAL
DEPARTAMENTO COORDINACION PRESUPUESTARIA
DEPARTAMENTO ECONOMIA PESQUERA
DEPARTAMENTO ASOCIACIONES COFRADIAS Y CENSOS
DEPARTAMENTO ORDENACION PESQUERA
SECCION ACUICULTURA Y MARISQUEO
DEPARTAMENTO FORMACION
SECCION TECNOLOGIA BUQUES
NEGOCIADO ASUNTOS GENERALES
NEGOCIADO ORDENACION
INSPECTORES
UNIDAD ESTRUTURAS Y RECURSOS
UNIDAD ASOCIACIONES Y COFRADIAS
UNIDAD ORDENACION Y CONTROL
NEGOCIADO ACTIVIDAD MARISQUERA
UNIDAD CENTRO DE CAPACITACION
NEGOCIADO CONSTRUCCIONES E INSPECCION
NEGOCIADO EXPEDIENTES Y REGISTROS
NEGOCIADO COORDINACION PUERTOS SALVAMENTO
NEGOCIADO ORDENACION COLECTIVOS PROFESIONALES

DIAGRAM 7

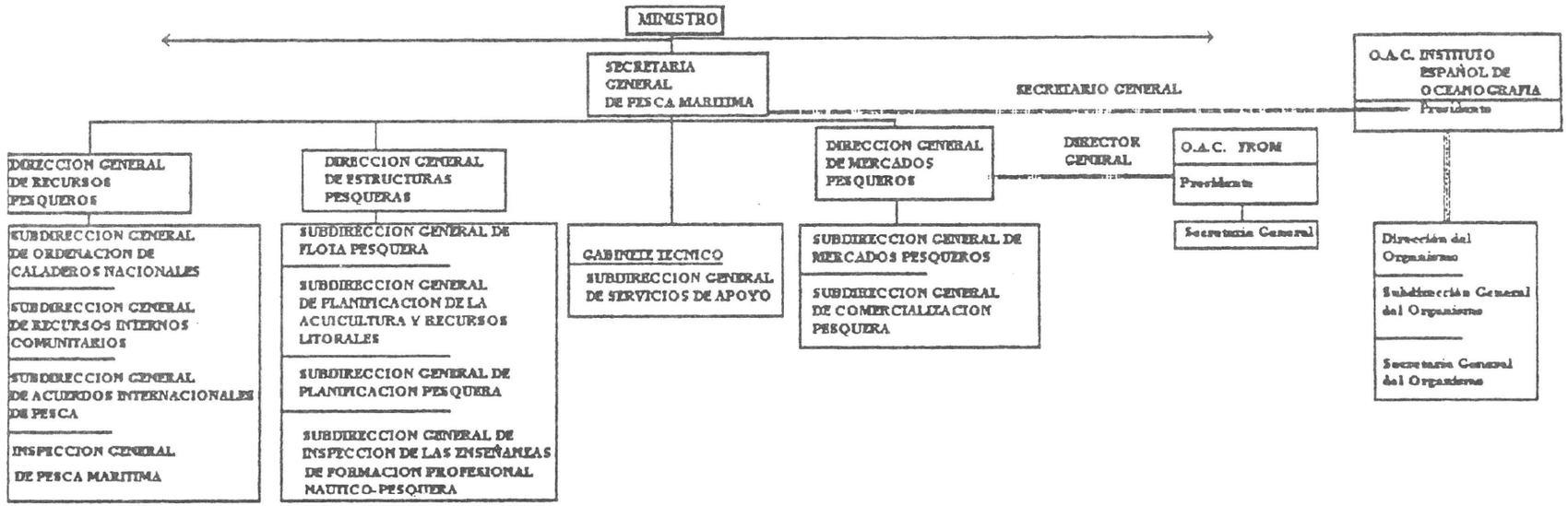

MINISTRO
SECRETARIA GENERAL DE PESCA MARITIMA
SECRETARIO GENERAL
O.A.C. INSTITUTO ESPAÑOL DE OCEANOGRAFIA
Presidente
DIRECCION GENERAL DE RECURSOS PESQUEROS
DIRECCION GENERAL DE ESTRUCTURAS PESQUERAS
DIRECCION GENERAL DE MERCADOS PESQUEROS
DIRECTOR GENERAL
O.A.C. FROM
Presidente
Secretaria General
SUBDIRECCION GENERAL DE ORDENACION DE CALADEROS NACIONALES
SUBDIRECCION GENERAL DE RECURSOS INTERNOS COMUNITARIOS
SUBDIRECCION GENERAL DE ACUERDOS INTERNACIONALES DE PESCA
INSPECCION GENERAL DE PESCA MARITIMA
SUBDIRECCION GENERAL DE FLOTA PESQUERA
SUBDIRECCION GENERAL DE PLANIFICACION DE LA ACUICULTURA Y RECURSOS LITORALES
SUBDIRECCION GENERAL DE PLANIFICACION PESQUERA
SUBDIRECCION GENERAL DE INSPECCION DE LAS ENSEÑANZAS DE FORMACION PROFESIONAL NAUTICO-PESQUERA
GABINETE TECNICO
SUBDIRECCION GENERAL DE SERVICIOS DE APOYO
SUBDIRECCION GENERAL DE MERCADOS PESQUEROS
SUBDIRECCION GENERAL DE COMERCIALIZACION PESQUERA
Dirección del Organismo
Subdirección General del Organismo
Secretaría General del Organismo

DIAGRAM 8