



HMAP Dataset 10: Catalanian Coast

# HMAP Dataset 10 Catalonian Coast

*Supporting Documentation*



**Càtedra d'Estudis Marítims**





## Summary

<b>Dataset Title:</b>	Catalonian Coast
<b>HMAP Case Study:</b>	Mediterranean (Catalan Sea sub-project)
<b>Large Marine Ecosystem:</b>	26: Mediterranean
<b>Subject:</b>	Fish (various) landings and fishing effort in Catalonia, 1831-1984
<b>Data Providers:</b>	Alfons Garrido & Joan Lluís Alegret Grup d'Estudis Socials de la Pesca Marítima University of Girona Campus Barri Vell Pl. Ferrater Mora, 1 17001 Girona Spain e-mail: <a href="mailto:alfons.garrido@udg.es">alfons.garrido@udg.es</a>
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<b>Extent:</b>	38,012 records
<b>Keywords:</b>	Statistics; History of Marine Animal Populations; History of fishing in Catalonia; Catalonia; Catalan Sea

## Citation

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## Section 1: Dataset Overview

### 1.1. Aims & Objectives

This dataset was generated following the HMAP Mediterranean workshop, held in Barcelona in September 2004. All the participants recognised the necessity of obtaining reliable and relevant historical data about the different Mediterranean ecosystems, in order to generate hypotheses about change over time.

Statistical data about Spanish fisheries has been compiled in conjunction with the Institute of Marine Science - Mediterranean Marine and Environmental Centre (ICM-CMIMA) biologists. The resulting dataset comprises information about the historical Catalan sea fisheries. Online delivery to the scientific research community and beyond aims to contribute and improve upon current knowledge. Catalan biologists are now working on future applications in the reconstruction of marine ecosystems using ecological models and developing temporal simulations and model comparisons. The reconstruction of past ecosystems - and subsequent comparison with the present status - will facilitate the evaluation of its changes through the last century.

### 1.2. Methodology

Dataset 10 is a product of the collection, systematisation and digitisation of statistics published between 1831 and 1984 in the *Official Spanish Fisheries Yearbooks* relating to the coast of Catalonia. The working scheme devised by HMAP Mediterranean - Catalan Sea Project in the compilation of this dataset may be divided into three distinct stages.

Stage one was undertaken by historians of the Grup d'Estudis Socials de la Pesca Marítima (GESPM), University of Girona. It was focused upon the location and evaluation of all the official fishing yearbooks published in Spanish during nineteenth and twentieth centuries. This involved research into the holdings of various university libraries within Catalonia; namely, the Nautical Faculty Library of the University of Barcelona; Social Science Library of the Autonomous University of Barcelona; General Library of the Pompeu Fabra University; Technical University of Catalonia Library or the Institute of Marine Science Library. Manuscripts relevant to this study were located in the Marine Archive (Ciudad Real) and General Government Archive (Madrid). These holdings contained official statistical data about Spanish fish landing and fishing effort from the 1830 to the third quarter of nineteenth century, but was not published. While the information held within these collections was deemed useful, incorporation into the present study was rejected given the economic and temporal limitations of this project.



All the yearbooks were initially photographed and digitalised from the original books over a period of two months. This was followed by stage two of the process, which involved the construction of a database using Microsoft Access. This presented the challenge of incorporating a broad range of data – including fishing effort and catch species – that had been gathered in numerous places and then collated and presented according to different criteria. Moreover, these criteria had undergone change over time. The final structure was modelled upon the key elements that emerged from the statistics; accordingly, it was designed in terms of catches, fishing effort, economic value and fishermen.

Data from the yearbooks was introduced into the database during the third and final stage of this process. Altogether 38,012 entries were made, corresponding to years 1831, 1868, 1892, 1907-1918, 1920, 1929, 1932-1934, 1940, 1941 and 1943-1984 (inclusive). As the foregoing suggests, a number of years between both extreme values of the published data (1831 and 1984) are missing. Two factors have led to these year omissions. In the first instance, certain years – from 1919, 1922-1923, 1935-1939, 1942 – are missing due to the fact that data did not exist. In the case of the remaining missing years, introduction into the dataset was not viable because of aggregation levels in respect of the original source material.



## Section 2: Explanation of Data Fields

HMAP Dataset 10 comprises 53 separate fields. Please note that this section does not include all of the fields within the dataset. Rather, field explanations are given where information specific to this dataset has been deemed necessary. Users should consult the HMAP Data Pages site (Data Management – How to build a dataset) for information regarding other fields.

### 2.1. General Information

#### **CASE\_STUDY**

“Northwest Mediterranean Sea. Catalanian Coast”: this describes the exact geographical coverage of the study. Please refer to the map located in Appendix I for the position of places cited in the dataset.

#### **SOURCE**

*Official Spanish Fisheries Yearbooks*: researchers are advised to consult the document ‘**Section Three: Historical Description**’ (pp 7-16) regarding the evolution of this source material. See ‘**Section Four: Source Table**’ (pp 17-23) for more detailed source references.

### 2.2. Spatial Parameters

#### **REGION**

“Catalan Sea”: the maritime region in the northwest of the Mediterranean Sea where fishing grounds included in this dataset are located.

#### **GROUND**

Data published within the *Official Spanish Fisheries Yearbooks* have been collated and published on the basis of different territorial units. The place names entered into this field refer to the locality responsible for recording landing information for particular territorial units. Data users should note that the territorial units have changed over time according to the various criteria chosen by each compiling body.

#### **LAT\_1**

This represents the latitude of the recording locality.

#### **LAT\_1\_PRECISION**

“Exact”: the exact position of the recording locality.

#### **LON\_1**

This represents the longitude of the recording locality.

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#### **LON\_1\_PRECISION**

“Exact”: the exact position of the recording locality.



**LAT\_2**

The latitude of the recording locality.

**LAT\_2\_PRECISION**

“Exact”: the exact position of the recording locality.

**LON\_2**

The fishing fleets of the Mediterranean coast practice coastal artisanal fishing, which requires that they return to port every day to unload their catches. Due to this limitation they can only make daily outings of a maximum of 40 nautical miles to the east to fish. Accordingly, the co-ordinates entered into this field represent 20 nautical miles to the east of the longitude of the recording locality.

**LON\_2\_PRECISION**

“Estimate”: the estimated longitude of the fishing ground.

**2.3 Species Information**

**VERNACULAR\_NAME**

Name of the species in Spanish as published in the *Official Spanish Fisheries Yearbooks*

All of the remaining fields within the grouping ‘Species Information’ have been completed using information garnered from FishBase at [www.fishbase.org](http://www.fishbase.org)

**SPECIES (COMMON\_NAME)**

Translation into English of species as published in the *Official Spanish Fisheries Yearbooks*.

**2.4. Catch and Effort Data**

**ObservedWeight**

Weight of the landings (unit: kilograms)

**CATCH\_MT**

Conversion of the “ObservedWeight” into metric tonnes.

**CONVERSION\_FROM**

“1 kilogram = 0.0010 MT”: Conversion formula used in transferring kilograms into metric tonnes

**VALUE\_LANDINGS**

The value which landings have realised at auction (unit: pesetas).



**1\_EFFORT\_UNIT**

Effort unit: "Fishing Gear"

**1\_EFFORT\_NET (TYPE)**

Specific type of net used. Only the methods indicated in the source are recorded.

**1\_EFFORT\_NET (NO)**

Number of fishing nets used

**1\_EFFORT\_NET (V)**

Estimation of the value of the fishing nets. Unit: current pesetas.

**2\_EFFORT\_UNIT**

Effort unit: "Vessels"

**2\_EFFORT\_VESSEL (NO.)**

Number fishing boats participating in the fishing.

**2\_EFFORT\_VESSEL (GRT)**

Gross Recorded Tonnage (GRT) of the fleet participating in the fishing. Unit: tonnes

**2\_EFFORT\_VESSEL (V)**

Estimation of the value of the boats participating in the fishing. Unit: current pesetas.

**2\_EFFORT\_VESSEL (P)**

Propulsion method used by each fishing vessel.

**2\_EFFORT\_VESSEL (HP)**

Total power of the effort units using motorised navigation. Unit: H.P.

**3\_EFFORT\_UNIT**

Effort Unit: "Fishermen".

**3\_EFFORT\_FISHERMEN (NO)**

The number of individuals recorded as participating in the fishing



### Section 3: The Evolution of Spanish Fishing Statistics

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The quantity, quality and reliability of the stated value of the fish unloaded and the fishing effort collected in the fishery statistics in Spain are highly conditioned by the evolution of the state fishery management policies linked to the various historical episodes through which the country has passed during the last 200 years. In light of the technical, political and historical conditioners that have affected Spain, it can be concluded that the preparation and publication of statistical data about fishing has experienced two very different periods: 1831-1939 and 1939 to the present.<sup>1</sup>

#### 1831-1939

At the end of the French occupation of Spain, and with the triumph of the liberal revolution and the strengthening of the State, fishing in Spain experienced a progressive but relentless process of increasing state control, that is, more and more intervention on the part of the Government in the management of fishing activities. The fishermen guilds, which had played that role by controlling access to the resources and to the means of production until the middle of the 19<sup>th</sup> century, gradually lost that control to maritime authorities through the various provisions and ordinances decreed within the framework of the Register, and were finally converted into the basic cells which provided a foundation for the new management of fishing affairs. The process of government interference with guilds for the benefit of the State was eroding the power of the guilds and brotherhoods of fishermen up and down the Catalan coast – guilds were abolished in Spain in 1865 as a result of the liberal revolution, although many of them were able to adapt and survive until the beginning of the 20<sup>th</sup> century – and introduced technological changes in fishing techniques focused mainly on trawl and purse seine fishing and on improvements in fish salting methods.

Institutional changes always imply a change in available documents. In the mid-19<sup>th</sup> century countries along the coast of Europe had, for the first time, begun to prepare official statistics on fishery production and reports of the activity. In Spain, however, this process began some years later. Until they were legally dismantled, the fishing guilds had been responsible for collecting and sending the data related with fishery production and manpower and techniques employed to the Maritime Authorities. After 1865 the functionaries in the commands were responsible for registering and sending the data to the recently created Central Fishery Commission, the body in charge of preparing fishing reports, but the lack of specific resources reserved for this task produced serious delays. In 1877 the Commission declared that:

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<sup>1</sup> See Section 4: Source Table, for detailed references pertaining to the source material used in this project.

*... since the abolition of the guilds in charge of providing these data left [the Commission] without the means to be able to continue it, the provisions decreed have been useless, arousing the jealousy of the local authorities, who could never do anything more when writing the reports than bring together the fishing boat captains to tell them the quantities fished during the elapsed period, a system that made it impossible to satisfy to any extent what was desired.<sup>2</sup>*

The report written about this topic recognised that the data provided by the commands were “proverbially inexact” and that a more effective and better equipped and manned system of vigilance was necessary to legislate wisely and uphold the regulations. What is more, reliable statistics would resolve the paradox created around fishermen’s complaints about the reduction of the catches and the increasing number of salting factories, the extensions granted for the leasing of tuna net traps and the construction of new boats. In 1884 it was reaffirmed that:

*The data provided by the maritime authorities originally come from those given by the industrialists, because the authorities have neither the means to acquire them directly nor any way to check them; the fact that such data are not only defective and erroneous, but also generally useless due to their lack of uniformity and because they are not accompanied by scientific observations, needs no demonstration.<sup>3</sup>*

The data collection defects and the errors detected in the data obtained in the last third of the 19<sup>th</sup> century meant that, in the majority of cases, they were never released. Official fishing statistics in Spain did not exist until fishery production data were published in 1883. However, given the situation, their historiographical value is pure estimation since they contain numerous mistakes. The data sent during the years prior to 1883, although received by the Ministry of the Navy, were not officially published. The quantity and quality of this information, and whether or not any of it was ever sent by the Authorities of Catalonia, is not known.

Beginning in 1868 the Central Fishery Commission published, at irregular intervals, a series of yearbooks which have become a very important source of information about various aspects of fishing at the end of the 19<sup>th</sup> century, for example studies of the tuna net traps of the Catalan coast such as Canyelles Majors in Roses<sup>4</sup> or studies of the extent of the technical and ecological conflicts resulting from the use of trawl nets north of the Catalan coast<sup>5</sup>. These documentary sources, however, cannot be used to compile the statistical series of the total production.

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<sup>2</sup> García Solá, F. *Memoria sobre la industria y legislación de pesca (1874-1879)* Madrid: Tip. Estrada, 1880, p. 834.

<sup>3</sup> Gutierrez Vela, R. *Memoria sobre la industria y legislación de pesca (1879-1884)*. Madrid: Impr. de la Viuda e Hijos de Fuentenebro, 1885

<sup>4</sup> Salerno, F. *La pesca de la tonyina amb almadraves: investigacions sobre Canyelles Majors (Roses)*. Maritime Fishing Social Studies Group. Unpublished.

<sup>5</sup> Soler, G. *Del bou a la vaca: la pesca d’arrosseigament a Catalunya i a l’Empordà (1865-1936)*. [Introduction to Research Project]. Girona: University of Girona, 2002.

In fact, the fishery statistics from 1880-1936<sup>6</sup> are characterised by an absence of continuous and homogenous data and by the diversity of the criteria used to create the tables. One of the main problems faced by any historian using these sources is the difficulty of trying to compile long series on production and subsequently interpreting them. The central problem is that each change that occurred in the institutions responsible for their publication implied a change in the criteria for data collection and presentation. The methods used to obtain the data were also not completely reliable. Some researchers argue against using these early statistics, at least before 1904, the year in which responsibility for producing them was given over to the Directorate General of the Merchant Marine. Although they were substantially improved and offered more explicit information which was presented more clearly, the official statistics were not convincing to scientists of the day. For example, the oceanographer and naturalist Odón de Buen, of the Spanish Institute of Oceanography (IEO, in Spanish), stated in the *Boletín de Pesca*s of September 1929 that:

*... fishing statistics didn't exist in our country; outside of Spain, such inconceivable idleness was generally condemned; it was even said in a well-known reference work (...) that they didn't contain the only data that was useful. I can, in addition, knowingly affirm that the data in those statistics were false.*<sup>7</sup>

De Buen reminded his scientific colleagues several times that the data concerning fishery production were not at all useful and that the Spanish fishing statistics, as a whole, were inferior to homologous statistics from other European countries. The creation of the IEO and Odón de Buen's promotion within the institution of statistics as a tool to discover the Spanish fishing reality stimulated its improvement. The leap forward provided by the creation of the IEO was very important, as demonstrated by the publication of *La pesca marítima en España* (1920), an "exhaustive economic study" in two volumes which marked the beginning of a new way to collect data and create tables based on criteria defined with precision and the willingness to be useful: the breakdown of the catch data, previously registered only as a bulk catch, into fish, crustaceans and molluscs; or the division of the coast into seven provinces according to geographical, biological and economic criteria. The 1920 study was followed by another one in 1921 and then by the series from 1925 to 1932, the year in which the Under Secretary of the Merchant Marine took on the responsibility of producing statistics according to criteria already defined by the IEO.

Despite the work and the intentions of Spanish naturalists and the improvements introduced by the IEO at the urging of Odón de Buen, the quality of Spanish statistics from that period is not good. This can be explained by the changing political situation during their compilation until 1934 and the resulting difficulty of looking more

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<sup>6</sup> The assessments referring the official statistics from this period are taken from Giráldez Rivero, J. "Fuentes estadísticas y producción pesquera en España (1880-1936). *Revista de Historia Económica*, 1991, vol. IX, num. 3, pp. 513-532.

<sup>7</sup> *Boletín de Pesca*s. September1929.

closely at many aspects of the history of Catalan fishing, such as a true assessment of its growth. Some authors use them only as guiding data<sup>8</sup>, and in any event their reliability, and even their utility, is questioned. For example, the combined catches are considered to be undervalued because not all of them could be registered with the means available and considerable amounts were not controlled.

Another methodological problem is raised because, from the same data referring to the production figures and the value of the catches, it is possible to compile as many as three different series that coincide fundamentally but differ on some specific points. As a result of the errors and information gaps found there (1917, 1919, 1920, 1922, 1923), the averages used to bridge these gaps vary to a great extent. Nevertheless, they are the only official data historians have to make an assessment, even an estimated one, of the evolution of fishing in Spain during the first third of the 20<sup>th</sup> century.<sup>9</sup>

### **From 1939 to the Present**

Fishing activity in Catalonia was resumed, after the Spanish Civil War, in a weakened state due to the losses produced in the fleet as a whole. The pre-war level was not re-attained until the mid-1950s. In the 1960s a considerable increase in fishing activity occurred promoted by a policy of official assistance aimed at renewing and increasing the productivity of the fleet. This resulted in the exponential growth of the fishing capacity in the entire country,<sup>10</sup> with very negative consequences for the state of the resources. With the creation and development of a more powerful and in many cases over-sized fleet, this stage defines an inflection point in the economic expansion of the sector and in the decline of the fishing resources and of the Mediterranean marine ecosystems, in general.

In 1943 the fishermen brotherhoods were ideologically reinvented by the dictatorship and the rhetoric of a new corporate spirit promoting the equality between work and capital was reintroduced into the fishing sector. At the national level a co-management model was introduced. The brotherhoods, public-law corporations legally connected to the State, monopolised a large number of the responsibilities related to the management and control of the activity, including the administrative formalities of the fishing boats, the system of health insurance for the fishermen, selling the catches directly to consumers through their own markets and providing the Government with basic data about the sector, among many others.<sup>11</sup> In return the State granted the brotherhoods a certain degree of autonomy within their territorial area, a situation that has maintained itself until now despite recent changes resulting from the globalisation and transformation of fish markets.

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<sup>8</sup> For example, Soler, G. *op. cit.* Employs the data from the yearbooks to make an approximated comparison between of various ports of the Catalan coast.

<sup>9</sup> Giráldez Rivero, *op. cit.*

<sup>10</sup> Sánchez Blanco, J. *Historia del Crédito Social Pesquera (1900-1985)*. Madrid: MAPA, 1992.

<sup>11</sup> Alegret, J.L.; Nadal, B. *Les confraries de pescadors: la dimensió social de la pesca a Catalunya*. Barcelona: Government of Catalonia. Directorate General of Maritime Fishing, 1987. ID. "La dimensión organizativa del sector pesquero en Cataluña: las cofradías de pescadores." *Antropología de la pesca: debates en el Mediterráneo*. Murcia: University of Murcia, 1999, pp. 157-178.

The State's desire to maintain close and careful control of the activity and promote its growth during the entire second half of the 20<sup>th</sup> century led to significant improvements in the mechanisms for obtaining data and for creating statistical tables, markedly increasing their reliability and utility. This amelioration can be confirmed by consulting the data published in the *Estadísticas de pesca* yearbooks and, beginning in 1972, in the *Anuario de Pesca Marítima*, qualitatively much superior to their immediate predecessors: more explicit data on individual species, ports of unloading and months allows more accurate and exhaustive studies of the evolution of the fishing capacity; and the stability of the model allows longer and more homogeneous series to be easily compiled. In comparison to the previous statistical stage, the data can be more easily applied to the biometric models used by ecologists and biologists to carry out environmental reconstruction studies. Greater control of the number and capacity of the boats is also reflected in the publication of *La flota Pesquera Española* beginning in 1965.

As of 1986, with the regional transfer of responsibilities concerning fishing, it now depends on the Ministry of Agriculture, Livestock and Fishing of the Government of Catalonia to compile the Catalan statistics and maintain the quality and details of the published information, available on Internet since the mid 1990s.<sup>12</sup> The data continues to originate from the fishermen brotherhoods, which maintain their status as basic elements of Catalan and Spanish fishery management, despite some recent pressure to modify the model. The sudden awareness on the part of the Catalan authorities of the importance of having good fishing statistics that facilitate decision making has led to data of increased quality, greater explicitness and clearer presentation. This has been demonstrated at many forums including the *Scientific Forum on Spanish Fishing in the Mediterranean Sea* in each and every one of the 10 annual meetings that have been held.

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<sup>12</sup> The DARP publishes the Catalan data in *Estadístiques agràries i pesqueres de Catalunya*. See the web of the Department: [www.gencat.net/darp/captures.htm](http://www.gencat.net/darp/captures.htm).



#### Section 4: Source Table

This table contains all printed primary sources used to create the database. Its include year of the statistics, title of the printed source, compiling authority, publication year, repository and library, and a classmark (UDC or location mark) of the volume or volumes used in each period.

Year	Title	Compiling Authority	Publication Year	Repository	Classmark
1831	<i>Memoria sobre la Industria y legislación de pesca que comprende desde el año 1870 al 1874</i>	Javier de Salas; Francisco García Solà	1876	Nautical Faculty Library, University of Barcelona, Barcelona, ES.	Old Batch, Copy 1.
1868	<i>Anuario de la Comisión Permanente de Pesca para 1868</i>	Standing Fishery Commission	1868	Social Science Library, Autonomous University of Barcelona, ES.	632.2/.9(058)Anu
1892	<i>Revista de Pesca Marítima</i>	Standing Fishery Commission	1893	Nautical Faculty Library, University of Barcelona, Barcelona, ES.	Old Batch, Copy 1.
1907	<i>Anuario de pesca y estadístico correspondiente a 1907</i>	Directorate-General of the Merchant Marine	1908	General Library, Pompeu Fabra University, Barcelona, ES.	(CAMBRA/M) BCA GRAL 1005070511
1908	<i>Anuario de pesca y estadístico de la Marina Mercante y de la pesca correspondiente a 1908</i>	Directorate-General of the Merchant Marine	1909	General Library, Pompeu Fabra University, Barcelona, ES.	(CAMBRA/M) BCA GRAL 1005070502
1909	<i>Anuario de pesca y estadístico de la Marina Mercante y de la pesca correspondiente a 1909</i>	Directorate-General of Navigation and Maritime Fishing	1910	General Library, Pompeu Fabra University, Barcelona, ES.	(CAMBRA/M) BCA GRAL 1005070494



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1910	<i>Anuario de pesca y estadístico de la Marina Mercante y de la pesca correspondiente a 1910</i>	Directorate-General of Navigation and Maritime Fishing	1911	General Library, Pompeu Fabra University, Barcelona, ES	(CAMBRA/M) BCA GRAL 1005070485
1911	<i>Anuario de pesca y estadístico de la Marina Mercante y de la pesca correspondiente a 1911</i>	Directorate-General of Navigation and Maritime Fishing	1912	General Library, Pompeu Fabra University, Barcelona, ES	(CAMBRA/M) BCA GRAL 1005070476
1912	<i>Anuario de pesca y estadístico de la Marina Mercante y de la pesca correspondiente a 1912</i>	Directorate-General of Navigation and Maritime Fishing	1913	General Library, Pompeu Fabra University, Barcelona, ES	(CAMBRA/M) BCA GRAL 1005070467
1913	<i>Anuario de pesca y estadístico de la Marina Mercante y de la pesca correspondiente a 1913</i>	Directorate-General of Navigation and Maritime Fishing	1914	General Library, Pompeu Fabra University, Barcelona, ES	(CAMBRA/M) BCA GRAL 1005070386
1914	<i>Anuario de pesca y estadístico de la Marina Mercante y de la pesca correspondiente a 1914</i>	Directorate-General of Navigation and Maritime Fishing	1915	General Library, Pompeu Fabra University, Barcelona, ES	(CAMBRA/M) BCA GRAL 1005070395
1915	<i>Anuario estadístico de España. Año II, 1915</i>	Directorate-General of the Geographical and Statistical Institute	1916	General Library, Pompeu Fabra University, Barcelona, ES	BCA GRAL HA1541 .A58
1916	<i>Anuario estadístico de España. Año IV, 1917</i>	Directorate-General of the Geographical and Statistical Institute	1918	General Library, Pompeu Fabra University, Barcelona, ES	BCA GRAL HA1541 .A58
1917	<i>Anuario estadístico de España. Año V, 1918</i>	Directorate-General of the Geographical and Statistical Institute	1920	General Library, Pompeu Fabra University, Barcelona, ES	BCA GRAL HA1541 .A58



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1918	<i>Anuario estadístico de España. Año VI, 1919</i>	Directorate-General of the Geographical and Statistical Institute	1921	General Library, Pompeu Fabra University, Barcelona, ES	BCA GRAL HA1541 .A58
1920	<i>La pesca marítima en España 1920</i>	Spanish Oceanography Institute (IEO)	1921	Institute of Marine Science Library, CSIC, Barcelona	Q-240a/b 73233001022
1929	<i>Boletín de Pesca</i>	Spanish Oceanography Institute (IEO)	1930	Social Science Library, Autonomous University of Barcelona, ES.	Serials Room. 57/5. Copy 1 Sciences.
1932	<i>Anuario Estadístico de España 1932-1933</i>	Directorate-General of the Geographical, Cadastral and Statistical Institute	1934	General Library, Pompeu Fabra University, Barcelona, ES	BCA GRAL HA1541 .A58
1933	<i>Anuario Estadístico de España 1934</i>	Directorate-General of the Geographical, Cadastral and Statistical Institute	1935	General Library, Pompeu Fabra University, Barcelona, ES	BCA GRAL HA1541 .A58
1934	<i>Estadística de pesca</i>	<u>Under Secretary of the Merchant Marine.</u> Spanish Oceanography Institute (IEO)	1935	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1940	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1941	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1941	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1942	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1943	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1944	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1944	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1945	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1945	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1946	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1946	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1947	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1947	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1948	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030





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1948	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1949	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1949	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1950	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1950	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1951	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1951	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1952	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1952	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1953	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1953	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1954	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1954	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1955	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1955	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1956	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1956	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1957	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1957	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1958	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1958	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1959	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1959	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1960	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1960	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1961	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1961	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1962	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1962	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1963	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030



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1963	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1964	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1964	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1965	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1965	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1966	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1966	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1967	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1967	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1968	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1968	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1969	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1969	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1970	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1970	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1971	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1971	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1972	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1972	<i>Estadística de pesca</i>	Directorate-General of Maritime Fishing	1973	Institute of Marine Science Library, CSIC, Barcelona	Serials Collection. 0112259000030
1973	<i>Anuario de pesca marítima</i>	Directorate-General of Maritime Fishing	1974	Institute of Marine Science Library, CSIC, Barcelona	Deposit. R/ES 639 Pes
1974	<i>Anuario de pesca marítima</i>	Directorate-General of Maritime Fishing	1975	Institute of Marine Science Library, CSIC, Barcelona	Deposit. R/ES 639 Pes
1975	<i>Anuario de pesca marítima</i>	Directorate-General of Maritime Fishing	1976	Institute of Marine Science Library, CSIC, Barcelona	Deposit. R/ES 639 Pes
1976	<i>Anuario de pesca marítima</i>	Directorate-General of Maritime Fishing	1977	Institute of Marine Science Library, CSIC, Barcelona	Deposit. R/ES 639 Pes
1977	<i>Anuario de pesca marítima</i>	Directorate-General of Maritime Fishing	1978	Institute of Marine Science Library, CSIC, Barcelona	Deposit. R/ES 639 Pes
1978	<i>Anuario de pesca marítima</i>	Directorate-General of Maritime Fishing	1979	Institute of Marine Science Library, CSIC, Barcelona	Deposit. R/ES 639 Pes



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1979	<i>Anuario de pesca marítima</i>	Directorate-General of Maritime Fishing	1980	Institute of Marine Science Library, CSIC, Barcelona	Deposit. R/ES 639 Pes
1980	<i>Anuario de pesca marítima</i>	Directorate-General of Maritime Fishing	1981	Institute of Marine Science Library, CSIC, Barcelona	Deposit. R/ES 639 Pes
1981	<i>Anuario de pesca marítima</i>	Directorate-General of Maritime Fishing	1982	Institute of Marine Science Library, CSIC, Barcelona	Deposit. R/ES 639 Pes
1982	<i>Anuario de pesca marítima</i>	Directorate-General of Maritime Fishing	1983	Institute of Marine Science Library, CSIC, Barcelona	Deposit. R/ES 639 Pes
1983	<i>Anuario de pesca marítima</i>	Directorate-General of Maritime Fishing	1984	Institute of Marine Science Library, CSIC, Barcelona	Deposit. R/ES 639 Pes
1984	<i>Anuario de pesca marítima</i>	Directorate-General of Maritime Fishing	1985	Institute of Marine Science Library, CSIC, Barcelona	Deposit. R/ES 639 Pes