

## Fishery Fact Sheet

CECAF Fisheries Reports 2011

# Spain Coastal purse seine sardine fishery - Moroccan Atlantic coast waters, South zones B and C, 2011

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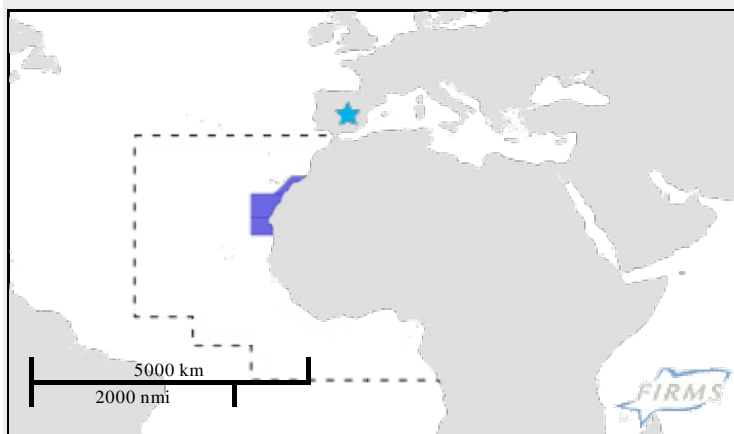
### Data Ownership

This document provided, maintained and owned by Food and Agriculture Organization (FAO), is part of CECAF Fisheries Reports - Spain data collection.

**Fishery life cycle** This fishery terminated on 1999.

**Overview:** The fleet was composed of purse-Seiners based mainly in Lanzarote (Canary Islands). The sardines were stored in bulk or in boxes, and generally preserved deep-frozen or on ice. Catches were festinated for fish meal as well as for canning. Most of the catches were composed of sardines higher than 19 cm (Santamaría, 1996).

### Location of Spain Coastal purse seine sardine fishery - Moroccan Atlantic coast waters, South zones B and C



#### Main layers

- FAO areas and their sub-divisions
- EEZ

#### Associated layers

- ★ Geographic reference

#### Intersecting layers

- Intersecting: FAO major fishing areas

#### Base layers

- 200 nautical miles arcs

### APPROACH: FISHING ACTIVITY

#### Fishing Activity

Fishing Gear: Purse seines  
 Type of production system : Commercial; Semi-industrial  
 Fishery Area: Morocco Atlantic coast - South Zone (B and C); Morocco; Atlantic, East ...; Atlantic, East ...; Atlantic, East ...  
 Seasonality: Along the year ...

#### Harvested Resource

Target Species: European pilchard(=Sardine)  
 Associated Species: Chub mackerel; Jack and horse mackerels nei

#### Means of Production

Vessel Type: Purse seiners

#### Fishery Indicators

Nominal Effort: Number of vessels  
 Participation: Number of fishermen  
 Production: Catch Zone B(26°-29° N); Catch Zone C (22°-26° N)

**Geographic reference:** Spain

**Spatial Scale:** National

## Table of Contents

Overview - Fishery History - Fishing Activity - Post Harvest - Management - Status and Trends - Source of Information

## History

Fishing for small pelagics such as anchovy and sardine in Northern Morocco was a common practice during the Middle Age for vessels coming from the Southern region of the Iberian Peninsula (Santamaría, 1995). This activity was maintained for centuries by boats following fish schools in their migrations across the narrow sea strip separating the Iberian and the African coasts. The establishment of canning and fishmeal factories in the Canary Islands during the sixties permitted the expansion of the Canarian fishery to the region between Sidi Ifni (29°30'N) and cape Bojador (26°N). In successive years it extended down to the border with Mauritania.

The introduction of the Law of the Sea forced fishing countries to negotiate the access to resources in coastal countries. The resulting agreements changed completely the features of small pelagic fisheries in the region making them the more and more restrictive over the years. Since the end of the 1980s, access to the fishing grounds for the Spanish fleet has been increasingly restricted and the catches reduced accordingly. In 1995 the protocol between the European Union and Morocco led to the replacement of the Spanish fleet with the Moroccan fleet in zone B (Saharan and Moroccan coasts, from 26°N to 29°N). The Spanish vessels were displaced further south, to zone C (Saharan coast between 22°N and 26°N), which had always been the active fishing area of other countries, principally the former USSR and other Eastern European countries (Guénette *et al.*, 2001). Finally, fisheries in Morocco were closed to the Canarian purse seiners by the end of the Fishery Agreement in 1999.

## Fishing Activity

**Type of production system:** Commercial; Semi-industrial

### Fishery Area

**Climatic zone:** Temperate. **Depth zone:** Shelf (50 m - 200 m); Slope - Upperslope (200 m - 500 m). **Horizontal distribution:** Neritic. **Vertical distribution:** Pelagic.

**Geo References for:** Morocco Atlantic coast - South Zone (B and C)

### Morocco Atlantic coast - South Zone (B and C)

Exclusive Economic Zone Areas (EEZ)	MAR - Morocco
FAO Fishing Statistical Subdivisions	34.1.13 - Atlantic, East central / 34.1.13
	34.1.31 - Atlantic, East central / 34.1.31
	34.1.32 - Atlantic, East central / 34.1.32

### More Geo References

The following area codes have been found as intersecting the location of Spain Coastal purse seine sardine fishery - Moroccan Atlantic coast waters, South zones B and C

FAO Major Fishing Areas	34 - Atlantic, Eastern Central
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	37 - Mediterranean and Black Sea
Large Marine Ecosystem Areas (LME)	26 - Mediterranean Sea
	27 - Canary Current

Details on depth zone: Shelf from 50 m to 300 m. The Moroccan Atlantic coast is part of one of the four major trade-wind driven continental margin upwelling zones in the world oceans, the northwestern African upwelling system (or the Canary Current System). In the Eastern Central Atlantic, the dynamics of an eastern boundary current interacting with trade wind-driven upwelling control this marine ecosystem with exceptionally high primary and secondary productivity (Cury and Roy, 1989; Binet, 1997; Demarcq and Faure, 2000). While coastal upwelling occurs mostly on the shelf, biogenic particles derived from upwelling are deposited mostly at the upper continental slope. Nutrient-rich coastal water is transported within the Cape Ghir filament region at 30°N up to several hundreds of kilometres offshore. Both upwelling intensity and filament activity are dependent on the strength of the summer Trades (Freudenthal et al., 2002).

### Resources Exploited

Sardine - Central part of Morocco

Sardine - Southern part of Morocco

Chub mackerel - From Cape Bojador to Senegal

Atlantic horse mackerel - Morocco, Mauritania, Senegal, Gambia, Guinea Bissau and Guinea (between 26° and 10° N)

Other resources: Stock of pompanos, amberjacks and other coastal small pelagics.

### Target Species

*Sardina pilchardus*

FAO Names : en - European pilchard(=Sardine), fr - Sardine commune, es - Sardina europea, ar - سردين  
أوروبا, zh - 沙丁鱼, ru - Сардина европейская

Juveniles (age 0) (1.5 %) and adults (age 1-7+) (98.5 %)

### Associated Species (Bycatch)

*Scomber japonicus*

FAO Names : en - Chub mackerel, fr - Maquereau espagnol, es - Estomino, ru - Скумбрия японская

*Trachurus spp*

FAO Names : en - Jack and horse mackerels nei, fr - Chinchards noirs nca, es - Jureles nep, ru -  
Ставриды

Small quantities

### Related Fisheries - Fishery(ies) switching activity seasonally or targeting the same stock

Morocco Coastal traditional purse seine sardine fishery - B zone

Morocco Coastal purse seine sardine fishery - C zone

Morocco Russian midwater trawl small pelagics fishery - C zone

Morocco Ukrainian and other nationalities midwater trawl small pelagics fishery - C zone

Morocco European union midwater trawl small pelagics fishery - C zone

Morocco National midwater trawl small pelagics fishery - C zone

Morocco National coastal purse seine small pelagics fishery - C zone

## Vessel Type

Purse seiners

## Flag State

 Spain

Purse seiners with 141 GRT, 361 h.p. and 24 m average length. The last years of the fishery, the fleet evolved to bigger vessels 500 GRT, 1 500 h.p. and 45 m length.

## Crew

18-25 persons (2009)

## Fisherfolks Community

Fishermen community from the Canary Islands and Andalucian ports

## Fishing Gear

Purse seines

Surrounding nets with purse lines (purse seines). The gear is locally called “traíña”. The main body-net is composed of a number of long and rectangular sheet nets, horizontally delimited through all its length by resistant net strips. The net is vertically kept through a lead-line in the ground-rope and a buoyed line in the head-rope. The purse line, locally called “jareta”, closes the seine when the fish school is surrounded, forming a big bag with the catches inside. They used to operate during the daylight, fishing over localized sardine schools.

## Seasonality

Along the year with the highest activity during the fourth quarter of the year

**Environmental limitations:** Strong winds in the fishing areas

## Trip Duration

4 fishing days

## Ports

Arrecife (Lanzarote), La Luz, Las Palmas (Gran Canaria) and Puerto del Rosario (Fuerteventura), in the Canary Islands; Algeciras and Isla Cristina in Andalucia.

## Fishery Indicators

Type	Measure	Value	Unit	Time period
Nominal Effort	Number of vessels	44	vessels	1976
	Number of vessels	6	vessels	1999
Participation	Number of fishermen	1000	persons	2009
Production	Catch Zone B(26°-29° N)	80000	tonnes	1976-1996
	Catch Zone C (22°-26° N)	60000	tonnes	1983-1999

# Post Harvest

## Fish Utilisation

Fish meal, fish flour and canning

## Markets

From Lanzarote (Canary Islands) to Europe and Africa

# Management

Management unit : No

## Jurisdictional framework

Management Body/Authority(ies): Ministère de l'Agriculture et de la Pêche Maritime. Département de la Pêche Maritime

**Mandate:** Monitoring; Management.

Area under national jurisdiction: Morocco

Maritime Area: Exclusive Economic Zone Areas (EEZ).

Management Body/Authority(ies): European Union

**Mandate:** Flag state responsibility for its fishing vessels operating in foreign area under national jurisdiction.

Area under national jurisdiction: Morocco

Maritime Area: Exclusive Economic Zone Areas (EEZ).

## Legal definition

Purse seiners-South.

## Management Regime

Management measures of the Spanish purse seine fishery were included in different Fisheries Agreement between the European Community and the Kingdom of Morocco. The fishery was closed after the end of the Agreement of 1995-1999. Management measures described below are those included in the last Fishery Agreement where this fishery was allowed (*OJ L 306, 19.12.1995, p. 7-43*) under the fishing category "Purse seiners-South".

## Management Methods

### CONSERVATION AND MANAGEMENT MEASURES with focus to Effort control-Licences system

- *Aquatic species-related measures*  
Authorized by-catch: 0 % of cephalopods and crustaceans, with the exception of crabs (5 %).
- *Gear-related measures*  
Gear dimension (maximum authorised dimensions of the seine net: 1000 m × 130 m)

- *Vessel-related measures*  
Access control: Vessel size
- *Fishing activity-related measures*  
Licences, vessel number (11), closed area (Northern 28°44'N and inside the 2 miles zone) and closed season (two months: February and March).

### **Related Fisheries - Fishing activity(ies) managed under the same management unit or being ruled by the same fishing agreement**

Spain Small scale purse seine anchovy fishery - Moroccan Atlantic coast waters, North zone  
 Spain Bottom wet fish and freezer trawlers shrimp fishery - Moroccan Atlantic coast waters  
 Spain Spain Offshore gillnetter hake fishery - Morocco Atlantic coast waters  
 Spain Offshore longliner hake fishery - Moroccan Atlantic coast waters  
 Spain Freezer bottom trawlers cephalopods fishery - Moroccan Atlantic coast waters, South

More information on fisheries legislation at: FAOLEX legislative database

## **Status and Trends**

The fishery was closed in 1999, with the end of the Fishery Agreement of 1995. Last Fishery Agreement, signed in 2006, does not include possibilities of this fishery.

## **Source of Information**

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