FISHERIES IN ITALY

January 2008
Directorate-General for Internal Policies of the Union

Policy Department: Structural and Cohesion Policies

FISHERIES

FISHERIES IN ITALY

NOTE

Contents:

Document describing the fisheries sector in Italy for the Delegation of the Committee on Fisheries to Sardinia (4-6/02/2008).

IPOL/B/PECH/NT/2008_01 08/01/2008

PE 397.238 EN
This note was requested by the European Parliament Committee on Fisheries.

This document is published in the following languages:
- Original: ES;
- Translations: DE, EL, EN, FR, IT, NL, PT

Author: Jesús IBORRA MARTÍN
Policy Department Structural and Cohesion Policies
European Parliament
B-1047 Brussels
E-mail: ipoldepb@europarl.europa.eu

Manuscript completed in January 2008.

This note is available on the Internet at:


The opinions expressed in this document are those of the author and do not necessarily reflect the official position of the European Parliament.

This document may be reproduced or translated for non-commercial purposes, as long as the source is cited and the publisher is informed in advance and a copy sent.
# CONTENTS

1. **Introduction** ........................................................................................................................................ 1

2. **Geographical framework** .................................................................................................................. 2

3. **Employment** ......................................................................................................................................... 3

4. **Production** .......................................................................................................................................... 4
   4.1. Catches ............................................................................................................................................. 4
   4.2. Aquaculture ..................................................................................................................................... 6

5. **Fishing fleet** .......................................................................................................................................... 8
   5.1. Structural adjustment of the Italian fishing fleet ............................................................................. 9
   5.2. Structure of the Italian fishing fleet .............................................................................................. 12
   5.3. Regional distribution of the fishing fleet ....................................................................................... 13

6. **Fishing activity** ................................................................................................................................... 14
   6.1. Fishing Gear ................................................................................................................................... 14
   6.2. Fishing methods ............................................................................................................................. 16
   6.3. Fishing tourism ............................................................................................................................... 18

7. **Fisheries management** ......................................................................................................................... 18
   7.1. Legal and institutional framework ................................................................................................. 19
   7.2. Management measures .................................................................................................................. 20
      7.2.1. *General permit system* ........................................................................................................... 21
      7.2.2. *Seasonal restrictions* .............................................................................................................. 21
      7.2.3. *Other restrictions on boats and gear* ...................................................................................... 21
      7.2.4. *Individual quotas* ................................................................................................................ 21
      7.2.5. *Fishing for juveniles (novellame)* ............................................................................................ 22
      7.2.6. *Bivalve fishing* ..................................................................................................................... 22
      7.2.7. *Sport fishing* ........................................................................................................................ 22

8. **Ports** .................................................................................................................................................. 23

9. **Use of production** .............................................................................................................................. 24
   9.1. Marketing ........................................................................................................................................ 24
   9.2. Processing ....................................................................................................................................... 24

10. **External trade** .................................................................................................................................. 26

11. **Research** .......................................................................................................................................... 28

12. **Organisation of the sector** ............................................................................................................... 29
Fisheries in Italy
1. Introduction

The fisheries sector in Italy employs around 47,000 workers. In 2005 production rose to 516,465 tonnes, of which 55% was sea fishing (52% in the Mediterranean), and 45% aquaculture. Fishing in internal waters is of very low importance. In the last eight years there has been a significant reduction in the Italian fishing fleet. In the same period, the deficit in the balance of external trade in fisheries products has increased, due to lower internal production and a major increase in imports.

Fishing activity is highly concentrated in Sicily and Puglia, in terms of both distribution of the fleet and employment.
The majority of the fleet is based on Sicily, and to a lesser extent Puglia. Another large proportion of the fleet is based in the northern Adriatic regions, where there is a higher power per boat, which is needed to fish with hydraulic dredges.

In terms of the length of the boats, although Sicily remains predominant in all sectors of the fleet, the position of Puglia is considerably higher for boats that are longer than 12 metres (17% of the boats in this sector). The same applies to Marche (10%) and Veneto (9%). Some regions have a higher position in the sector of boats below 12 metres. This is the case of Campania or Sardinia.

The main fishing port in terms of volume landed is Mazara del Vallo (south-eastern Sicily), followed by Ravenna (northern Adriatic), Ancona (central Adriatic), Bari (southern Adriatic), Palermo (south-eastern Tyrrhenian) and Chioggia (northern Adriatic). The high number of ports in Liguria paints a false picture as most of them are simply small quays used for small-scale fishing boats.

2. Geographical framework

Administratively speaking, the Italian Republic is divided into 16 regions, 5 of which have a special autonomous system (Friuli-Venezia Giulia, Sardinia, Sicily, Trentino-Alto Adige and Valle d'Aosta), while the 11 others (Abruzzo, Basilicata, Calabria, Campania, Emilia-Romagna, Lazio, Liguria, Lombardia, Marche, Molise, Piemonte, Puglia, Tuscany, Umbria and Veneto) are subject to the general administrative system.

The Italian Republic has a surface area of 301 270 km². This surface area is distributed across the 251 472 km² of the Italian Peninsula, the 25 708 km² of Sicily and the 24 090 km² of Sardinia.

![Map of Mediterranean and Black Sea](image)

Italian territorial waters extend to 12 nautical miles with a surface area of 7 210 km². The coast is 7 456 kilometres long and the continental shelf, to a depth of 200 metres, has a surface area of 201 310 km². The distribution of the continental shelf is very uneven. It is very broad in the Adriatic and south of Sicily, but very small in the centre of the Tyrrhenian Sea. The areas where the continental shelf is broad are the most productive.

In 1951 Tunisia demanded an exclusive fishing area marked out by the 50-metre isobath. The use of this criterion to mark out a sea area is unique in international fisheries relations. Given how shallow the waters are in the region, the limit of Tunisia’s exclusive area is 75 nautical miles from the Tunisian coast and only 15 nautical miles from the Italian island of Lampedusa. On 20 August 1971 Tunisia and Italy signed a bilateral agreement on sharing the continental shelf. Tunisia’s exclusive area includes a very rich fishing ground (‘Il Mammellone’), traditionally fished by Italian fishermen, which is considered by Italy to be part of the high seas.

Malta, meanwhile, has secured exemption from Community regulations, allowing it to maintain a fishing conservation area of 25 nautical miles. In this area, Malta’s Accession Treaty limits coastal fishing to vessels that are less than 12 metres long, except for a limited number of larger vessels that do specific types of fishing. This measure was transposed in Council Regulation
(EC) No 1626/94 of 27 June 1994, laying down certain technical measures for the conservation of fishery resources in the Mediterranean.

On 28 November 1986 Italy and France concluded a Treaty defining territorial waters in the Strait of Bonifacio, between Corsica and Sardinia. However, the negotiations between France and Italy to define the continental shelves still need to overcome some geographical problems due to the presence of islands and the concave and convex configuration of the coastlines.

Italy has around 20 000 km² of lakes, reservoirs and rivers. Fishing in internal waters is done in around 570 lakes and artificial reservoirs.

3. Employment

It is estimated that around 47 000 jobs are linked to the fisheries and aquaculture sectors: 69% in fishing, 12% in aquaculture, 14% in the processing industry and 5% in related activities. As a result, the regional distribution of jobs is similar to that of catches.

Thus most jobs are to be found in Sicily (22%) and Puglia (14%). Other regions such as Veneto, Sardinia, Emilia-Romagna, Campania or Marche account for around 6% to 8% each. The remaining regions contribute less than 3%, with the exception of Abruzzo (4%).

Since 1999 there has been a sharp decrease in the number of jobs, primarily among onboard workers. This reduction has affected all fisheries, although it has had a greater effect on coastal trawling and small-scale fishing. Various factors have contributed to the reduction of employment in the sector:

- the decrease in productivity;
- the increase in costs;
- incentives to permanently withdraw vessels;
- restructuring to other activities, both associated with and separate from the fishing sector;
- the banning of certain fishing techniques (such as ‘spadare’).

Given that some of these factors imply a reduction in income, the financial situations of onboard workers has deteriorated.
4. Production

The majority of Italian production results from fishing in the Mediterranean (52%) and aquaculture (45%). Catches in the Adriatic Sea and the Sicilian Channel account for the majority of total catches. The majority of fishing in ocean waters is done along the Saharan coast, in the waters of Cape Verde and the Indian Ocean. Fishing in the Indian Ocean is for tuna, while in the two other areas, the catches are mainly cephalopods and other fish. Catches of hake are quite large in the Saharan fishing ground.

Nevertheless, as far as the value of production is concerned, the contribution of Mediterranean fishing has increased to 71% of the total. The value of molluscs from aquaculture only represents 13% of the total (despite accounting for 32% of the volume).

The contribution of oceanic fishing is falling gradually, as regards both the volume and value of production.

4.1. Catches

The composition of catches is very heterogeneous, reflecting the range of species that is predominant in most fishing systems. Only a few fisheries (sardines, shrimp, swordfish, tuna, bivalve shellfish) are focused on a specific species.

The four main species caught are: anchovies, hake, striped venus and sardines, which represent 26%, 6%, 6% and 5% of total catches. Consequently, the largest volume of captures is small pelagic fish, such as anchovies (*Engraulis encrasicolus*) and sardines (*Sardina pilchardus*). The main demersal species are red mullet (*Mullus barbatus*) and hake (*Merluccius Merluccius*). The cephalopods, mainly cuttlefish (*Sepia officinalis*), octopus (*Octopus vulgaris*), and curled octopus (*Eledone cirrhosa*), form a large proportion of landings. The majority of crustacean catches are deepwater rose shrimp (*Parapeneaus longirostris*) and mantis squillid (*Squilla mantis*). The main large pelagic species landed are bluefin tuna (*Thunnus thynnus*), albacore tuna (*Thunnus alalunga*) and swordfish (*Xiphias gladius*). Hydraulic trawlers catch bivalve shellfish, mainly in the northern Adriatic.

The target fish vary according to the fleet sector. The main commercial species for bottom trawlers are hake (*M. Merlucius*), mullet (*Mullus spp.*), scampi (*Nephrops norvegicus*), deepwater rose shrimp (*P. longirostris*), mantis squillid (*Squilla mantis*), octopus (*O. vulgaris*), curled octopus (*E. cirrhosa*) and squid (*Loligo vulgaris* and *Illex coindetii*). Fishing for blue and red shrimp (*Aristeus antennatus* and *Aristaeomorpha foliacea*) is particularly significant in the Tyrrhenian Sea, the Sicily Strait and the Ionian Sea.

Small-scale fishing vessels catch a wide range of species, both demersal and pelagic, for example cuttlefish, octopus, scorpionfish (*Scorpaena spp.*), lobster (*Palinurus elephas*), hake, sole (*Solea vulgaris*), sea bream, swordfish, tuna, etc.
Seine boats and pelagic trawlers focus on small pelagic fish, such as sardines and anchovies. The majority of tuna catches are bluefin tuna and, to a lesser extent, albacore tuna.

The bivalve species caught by hydraulic dredges are *Tapes spp.*, *Chamelea galina* and *Callista chione*.

Bottom trawling represents 40% of total landings, followed by small-scale fishing (30%) and polyvalent boats (15%). Small-scale fish landings have a greater average value than bottom trawls, polyvalent boats or tuna boats. The average value of landings by seine boats and pelagic boats is scarcely a third of the value of landings by bottom trawlers.

In general, all catches have decreased over recent years.

The volume of catches of ‘other fish’ clearly reflects the multiple species of fish in the Mediterranean, although since the mid-1990s it has significantly decreased as a result of the reduction in the diversity of catches.

The development of small pelagic fish (anchovies, sardines and bluejack mackerel) firstly demonstrates the acute and progressive crisis in sardine catches, which started in the first half of the 1980s. Subsequently, it reflects the collapse of anchovy catches from 1987 and its later recovery. Although fishing of bivalve molluscs has benefited since 1998 from the application of a system of self-management, resulting in an improvement in catches, other circumstances, primarily climatic, have produced a decrease in catches.

The reduction in resources has resulted in a reduction in activity that is greater than the reduction in the fleet capacity. This situation, along with the increase in costs, is changing the perspective of businesses, so that long-term profit is more important than day-to-day catches. This has been a general process, with the exception of the sectors dedicated to fishing bluefin tuna and those that use hydraulic dredges for fishing bivalve molluscs.

Catches of anchovies, sardines and bluejack mackerel are mainly landed in Emilia-Romagna, Puglia and Veneto, tuna in Puglia and ‘other fish’ in Sicily and Puglia. Cephalopods are mainly
Fisheries in Italy

landed in Sicily, Puglia and Campania, other molluscs in Emilia-Romagna, Sardinia and Liguria, and crustaceans in Puglia, Sicily and Emilia-Romagna.

In all, 60% of the volume of Italian production and 63% of its value is landed in five regions (Sicily, Puglia, Marche, Veneto and Emilia-Romagna). Sicily and Puglia alone represent 40% of catches. The Adriatic coastal regions represent 37% of the volume of catches and 30% of their value. In general, physical and financial productivity are greater in the south and on the Adriatic coast than on the Tyrrhenian coast. However, the highest productivity levels tend to mean lower prices.

The northern Adriatic (north of Rimini) is an important reproduction area. Spawning takes place from November to March. In spring the juveniles are concentrated in the coastal areas and the lagoons of the northern Adriatic, where they grow until late summer. At the end of summer the species migrate south, at between 5 and 6 nautical miles from the coast. Catches of small pelagic fish in the Adriatic are largely influenced by market preferences. While anchovies are more favoured in Italy, there is more demand for sardines in the countries to the east of the Adriatic.

Towards the end of the 1980s, when the allocation of fishing permits was frozen, the fishing effort had considerably increased. As a result, in the Sicily Strait catches per hour of trawling decreased by between 30% and 50% between the beginning of the 1970s and the end of the 1990s (Levi et al., 2001). Another sign of overfishing was the change in discarded catches over the 1990s. In the mid-1980s discarded catches were between 60% and 70% of catches by the Mazara del Vallo fleet, and by the mid-1990s they had decreased to 50%, dropping to 20% by 2000. Some species, such as the short-nose green-eye (Chlorophtalmus agassizi), the argentine (Argentina sphyraena) and scampi (Plesionika spp.), which were traditionally discarded by the Mazara del Vallo trawling fleet, are now landed and sold.

Resources in south-eastern Sicily are benefiting from Malta’s extensive exclusive zone, in which trawling is limited and is mainly for blue and red shrimp. In south-western Sicily there has been a reduction in the fishing effort over the last decade, due to structural changes and the Mazara trawlers moving to more distant fishing grounds.

Italy has around 20 000 km² of lakes, reservoirs and rivers, and fishing in internal waters is done in around 570 lakes and artificial reservoirs: 20% of production is cyprinide fish, 10% salmonoids, 5% pike and perch and 3% eels. Around 400 authorised professional fishermen are registered, and are members of 37 cooperatives. The majority of catches in internal waters take place in Lombardia and Umbria. These two regions produced 68% of catches in internal waters in 2004. While captures are increasing in the north, they are decreasing in the centre and south of the country. Freshwater fishing is managed both at national level and by various local bodies.

National legislation defines both the general framework for fishing and the quality of internal waters. The regions (Regione) establish the general fishing periods and regulations (minimum sizes, authorised tackle, etc.), allowing the local authorities (Provincia) to adopt more restrictive measures. The provinces also manage restocking.

4.2. Aquaculture

Law 41/82, as part of the National Plan for Fishing and Aquaculture, established the priorities for developing the aquaculture sector as reducing the environmental impact, diversifying production, formulating new marketing strategies through producer associations, and improving quality. The Law also established a requirement to renew the priorities every three years.
Over the last decade, aquaculture has played an essential role in the Italian fishing sector. In addition to the production for consumption, Italy is a major producer of juveniles, and production of juveniles (mainly sea bass and sea bream) is concentrated in Puglia, Veneto and Tuscany.

Italy is also a large importer of aquaculture products, despite the fact that it also exports significant quantities. The majority of farms produce euryhaline and marine species, and the remainder produce freshwater species, mainly trout.

Following a major increase between the mid-1980s and the late-1990s, aquaculture production is stabilising. Competition has increased, and prices and margins have considerably decreased, requiring greater productivity and the introduction of new technologies, and it is unlikely that there will be further increases in demand, especially for new species. In addition, the sector is suffering from additional costs associated with applying environmental legislation, which requires fish factories to reduce their impact on the environment.

The majority of aquaculture production is mussels and clams. These two species represent 71% of Italian aquaculture production, and are produced in two different ways. There is an extensive production system in coastal lagoons (vallicolture), but intensive systems have also been developed. Vallicolture is a practice that is specific to Italy, helping to protect the wetlands around the Adriatic Sea. Technological modernisation has allowed vallicolture to develop into a semi-intensive integrated system. The impact of the proliferation of piscivorous birds on extensive production of fish and competition in the market has limited the intensification of traditional fish farming in the Italian coastal lagoons. It has also reduced the capacity to manage production and the environment at the same time.

The drought in 2003 also had a very negative effect on traditional vallicolture. Intensive production, traditionally based on land, is also limited by the need to reduce the environmental impact, and the lack of land due to intensive use of coastal areas means that it is being reduced in favour of floating systems.

The production of mussels has followed the same trend. Traditional mussel production is done on piles in protected tide pools; production on rafts in the open sea is on a much smaller scale. Between the mid-1980s and the mid-1990s, production of manila clams (Tapes philippinarum)
Fisheries in Italy

rapidly increased, due to rationalisation of techniques and repopulation in some coastal areas, mainly the Po delta.

The majority of fish farming production is freshwater species (trout, wels catfish and sturgeon) and euryhaline species, such as sea bass, gilt-head sea bream, mullet and eel. The trout market fluctuates very little, both in price and in production volume.

In the last twenty years fish farming production has doubled. This increase in production is due to the development of intensive practices for breeding euryhaline species, mainly gilt-head seabream (*Sparus aurata*) and sea bass (*Dicentrarchus labrax*). These two species account for 96% of the production of euryhaline species. Between 1997 and 2001 the production of sea bass increased by 17.3% and that of gilt-head sea bream by 30%. The increase in production was possible due to the availability of juveniles at reasonable prices. In response to the growing demand for intensive and semi-intensive farms, the production of juveniles increased 27-fold in fifteen years, reaching 96 million units in 2003. The production of sea bass and sea bream was affected by the price crisis in 2001 and 2002 but has recovered since then. Since the crisis Italian production has followed a strategy based on diversification, focusing on more prepared products.

In general, production of sea bass and seabream is dominated by small producers, operating from around 130 separate facilities. Approximately, 60% are land-based and the remainder use marine farms. However, the development of land-based facilities is limited by the need to reduce their environmental impact and by the scarce availability of land, which has to compete with other activities in coastal areas. Production in marine farms is therefore growing at a faster rate.

In recent years, some species have been introduced such as *Diplodus sargus* (white sea bream), *Puntazzo puntazzo* (sharp-snout sea bream), *Pagellus erythrinus* (Spanish sea bream), *Umbrina cirrosa* (corb), *Dentex dentex* (common dentex).

The fattening of bluefin tuna has taken place in Italy, as in other Mediterranean countries, in order to satisfy the demands of the Japanese market. However, this practice presents biological and ecological problems, and fisheries management problems. There are also conflicts with other coastal activities and competition with some fisheries.

At the end of 2007, 13 fattening centres for bluefin tuna with a capacity of 12 100 tonnes were added to ICCAT’s ‘positive list’. Sicily accounts for 42% of fattening capacity, followed by Calabria with 32% and Campania with 26%. Nonetheless, at a provincial level the greatest concentration of production capacity is in Cosenza (Calabria), which accounts for 26%. Production capacity in the provinces of Naples, Salerno, Messina, Palermo and Trapani varies between 11% and 13%. Vibo Valentia and Agrigento account for just 7% of production capacity.

5. **Fishing fleet**

At the end of 2007 the Italian fleet was made up of around 14 000 vessels, the second highest number in the Community, and had the fourth largest capacity. With the exception of 26 ocean-going boats, the Italian fleet fishes in Italian coastal waters. Around two thirds of the fleet is used for small-scale fishing. The average vessel in the Italian fleet is 10 metres long, with an average power of 84kW. A large proportion of the fleet is used for multiple species and uses a variety of fishing methods.
In 2006 the Italian fleet represented 17% of all boats in the European Union of 25. However, its share varies greatly according to the different boat lengths. The proportion of medium-sized boats (12 to 30 metres long) is much greater than the Italian fleet’s proportion of the EU fleet as a whole. The percentage of boats between 12 and 18 metres long (38% of the EU25). The importance of coastal fishing is demonstrated by the fact that the fleet has 17% of Community boats measuring 6-12m.

The importance of small-scale coastal fishing in Italy is demonstrated by the fact that 16% of Community boats are between 6 and 12 metres long. The Italian boats measuring more than 30 metres only account for a very small percentage of the Community fleet.

In general, the gross tonnage of the Italian fishing fleet is much lower than the Community average, while the average power is similar to or just below the average, depending on the length of the boat. This applies broadly to all vessel sizes. As part of the restructuring of the fleet, the tonnage of boats is generally being increased.

However, in an abrupt shift during the first quarter of 2007, the situation was reversed, with the appearance of boats with less tonnage and more power.

Nevertheless, according to the Eurostat data, there are two situations that differ significantly from the Community average. Firstly, the tonnage of boats measuring less than 6 metres is much higher than the Community average, but their power is much lower.

The situation is very different among boats measuring more than 42 metres. At this end of the scale, both the tonnage and power are far below the Community average. In this sector, the average tonnage is only 31% of the Community average, while the average power is 52%.

### 5.1. Structural adjustment of the Italian fishing fleet

The graph opposite shows the development of the Italian fishing fleet. The reduction is a result of the application of Community regulations to adjust the capacity of the fleet to fishing resources. The greatest reductions took place after the 2002 reform of the common fisheries policy. This reform introduced a new system to limit the fishing capacity of the EU fleet. This
system replaced the Multi-Annual Guidance Programmes, giving greater responsibility to the Member States to achieve a better balance between their fleets and the resources available. The structural adjustment of the fleet was done in the following ways:

- Scrapping and refunding of fishing licences;
- Exporting boats or using them for activities other than fishing;
- Transferring boats to joint ventures with shares owned by companies from third countries.

The development of the Italian fishing fleet differs from that of the EU as a whole. The number of boats has fallen slightly more than the EU15 average has fallen. However, between 2001 and 2003 the tonnage, and in particular the power, both increased.

Subsequently, with the introduction of the entry/exit regime, they fell once again. The result of this process is that the Italian fleet’s share of the power of the Community fleet as a whole has remained level, while its contribution to the number of vessels and tonnage has decreased.

The graph opposite shows the importance of the period prior to the 2002 reform. The average power slightly exceeded the Community average. However, the relatively low value of the tonnage did not change. As a
Fisheries in Italy

result, the power per GRT considerably exceeded the Community average.

The adjustment of the capacity of the fleet was more evident in terms of tonnage, and less so in terms of the power of the boats. This development reflects the fact that the structural adjustment was less intense in some types of fishing such as trawling and dredging. It also shows that the adjustment had a greater impact on smaller boats and seine fishing.

In terms of the number of boats, the reduction in the capacity of the fleet has most affected coastal fishing, boats that use passive fishing gear and, to a lesser extent, coastal trawling and polyvalent boats. However, in terms of tonnage, the greatest reductions have been in coastal trawling and the polyvalent fleet.

In general, the reduction in fleet capacity has been done using old boats with high maintenance and repair costs, with a low onboard safety level and out-of-date technology. The structural adjustment policy only accelerated the process of expelling the most obsolete and the least competitive boats from fishing, which would have happened anyway. It also had a major impact on reducing employment, with very negative social effects, notably in the south, where there is little or no alternative employment.

However, the objective of adjusting the capacity of the fleet to the resources does not appear to have been achieved, as a reduction in catches per unit of fishing effort has been recorded. The restructuring of the Italian fishing fleet moved at a faster pace between October 2006 and June 2007. An analysis of the entry/exit regime register shows a 6% reduction in tonnage and 3% reduction in power. This reduction was aggravated by the rise in fuel prices and had more of an impact on boats using trawling gear rather than fixed gear. During that period the Italian fishing fleet registered as many entries as exits, and the entries corresponded to vessels that had less capacity and more power than those that left the fleet.
Since the entry into force of the entry/exit regime, the tonnage of the boats has generally risen, to such an extent that capacity remains slightly above the maximum limit. This situation is due to the fact that the tonnage of the Italian fleet only accounts for a very small share of the average of the Community fleet as a whole.

Nonetheless, the sharp reduction in the fleet observed in the first half of 2007 was accompanied by the incorporation of vessels with greater power and less tonnage. This reversal of the trend appears to have come to a halt, however.

5.2. **Structure of the Italian fishing fleet**

<table>
<thead>
<tr>
<th>Type of gear</th>
<th>Number of boats</th>
<th>Tonnage (GT)</th>
<th>Engine power (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed gear</td>
<td>56%</td>
<td>11%</td>
<td>22%</td>
</tr>
<tr>
<td>Trawling gear</td>
<td>44%</td>
<td>89%</td>
<td>78%</td>
</tr>
</tbody>
</table>

*Source: Own based on the Community Fishing Fleet Register*

Although the difference between the numbers of boats using fixed gear and trawling gear is not very great, boats that use trawling gear represent 89% of the total tonnage and around 78% of the total power. This is due to the high proportion of small boats in the Italian fleet and the fact that this sector prefers to use fixed gear. A total of 68% of the Italian fishing fleet is made up of boats less than 12 metres long, representing 10% of the tonnage and 24% of the power.

Another significant indicator is the fact that, according to the Community Fishing Fleet Register, around 1 700 boats (12% of the Italian fishing fleet) declare that they do not use a motor.

<table>
<thead>
<tr>
<th>Distribution of the Italian fleet by average length, tonnage and power</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Boats &gt;12 m</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>No. boats</td>
</tr>
<tr>
<td>Tonnage (GT)</td>
</tr>
<tr>
<td>Power (kW)</td>
</tr>
<tr>
<td>Average tonnage (GT/boat)</td>
</tr>
<tr>
<td>Average power (kW/boat)</td>
</tr>
</tbody>
</table>

*Source: Own from Community Fishing Fleet Register*

The Italian fishing fleet is quite old. The average age of the boats is 28 years. Boats that are shorter than 12 metres have an average age of 30, while boats longer than 12 metres have an average age of 23.

In total, 85% of boats are made of wood, 11% of the boats that are more than 12 metres long have a metal hull, and 4% of boats that are less than 12 metres long have a plastic or fibreglass hull.

The average length of boats with wooden hulls is 10 metres, for boats with metal hulls it is 23 metres, and for boats with fibreglass hulls it is 8 metres. The average age of boats with wooden hulls is 30, while for boats with metal hulls it is 16 years, and for fibreglass hulls it is 20 years.
### Regional distribution of the Italian fishing fleet

<table>
<thead>
<tr>
<th>Percentage Distribution of Boats</th>
<th>% of Total Fleet</th>
<th>Tonnage (GT)</th>
<th>Power (kW)</th>
<th>GT/boat</th>
<th>kW/boat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Boats</td>
<td>Abruzzo</td>
<td>4%</td>
<td>5%</td>
<td>4%</td>
<td>18.1</td>
</tr>
<tr>
<td></td>
<td>Calabria</td>
<td>7%</td>
<td>3%</td>
<td>4%</td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td>Campania</td>
<td>9%</td>
<td>7%</td>
<td>7%</td>
<td>11.2</td>
</tr>
<tr>
<td></td>
<td>Emilia-Romagna</td>
<td>6%</td>
<td>5%</td>
<td>7%</td>
<td>12.7</td>
</tr>
<tr>
<td></td>
<td>Friuli-Venezia Giulia</td>
<td>3%</td>
<td>1%</td>
<td>2%</td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td>Lazio</td>
<td>4%</td>
<td>4%</td>
<td>5%</td>
<td>13.5</td>
</tr>
<tr>
<td></td>
<td>Liguria</td>
<td>4%</td>
<td>2%</td>
<td>3%</td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td>Marche</td>
<td>7%</td>
<td>10%</td>
<td>9%</td>
<td>21.3</td>
</tr>
<tr>
<td></td>
<td>Molise</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
<td>35.9</td>
</tr>
<tr>
<td></td>
<td>Puglia</td>
<td>12%</td>
<td>14%</td>
<td>14%</td>
<td>15.6</td>
</tr>
<tr>
<td></td>
<td>Sardinia</td>
<td>10%</td>
<td>7%</td>
<td>9%</td>
<td>9.8</td>
</tr>
<tr>
<td></td>
<td>Sicily</td>
<td>24%</td>
<td>32%</td>
<td>25%</td>
<td>18.9</td>
</tr>
<tr>
<td></td>
<td>Tuscany</td>
<td>5%</td>
<td>3%</td>
<td>4%</td>
<td>9.9</td>
</tr>
<tr>
<td></td>
<td>Veneto</td>
<td>6%</td>
<td>6%</td>
<td>8%</td>
<td>15.4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>14.3</strong></td>
<td><strong>83.8</strong></td>
</tr>
</tbody>
</table>

*Source: Own from Community Fishing Fleet Register*

The majority of the fleet is based in Sicily, followed some way behind by Puglia. Another large proportion of the fleet is based in the northern Adriatic regions, where there is a higher power per boat, which is needed to fish with hydraulic dredges.

In terms of the length of the boats, the distribution of the fleet by region differs from the previous table. Although Sicily remains predominant in all sectors of the fleet, the position of Puglia is considerably higher for boats that are longer than 12 metres (17% of the boats in this sector). The same applies to Marche (10%) and Veneto (9%).

However, some regions have a higher position in the sector of boats below 12 metres. This is the case of Campania or Sardinia (11% of the boats in this fleet sector in each of these regions).
6. **Fishing activity**

6.1. **Fishing Gear**

This table shows the gear declared under Regulation (EC) No 26/2004 on the Community Fishing Fleet Register.

<table>
<thead>
<tr>
<th>Code</th>
<th>Gear</th>
<th>Boats Gear 1</th>
<th>Boats Gear 2</th>
<th>Total</th>
<th>% Boats Gear 1</th>
<th>% Boats Gear 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRB</td>
<td>Boat dredges</td>
<td>713</td>
<td>68</td>
<td>781</td>
<td>5%</td>
<td>0%</td>
</tr>
<tr>
<td>Dredges</td>
<td></td>
<td>713</td>
<td>68</td>
<td>781</td>
<td>5%</td>
<td>0%</td>
</tr>
<tr>
<td>GND</td>
<td>Driftnet</td>
<td>187</td>
<td>281</td>
<td>468</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>GNS</td>
<td>Set (anchored) gillnets</td>
<td>2 527</td>
<td>5 894</td>
<td>8 421</td>
<td>18%</td>
<td>42%</td>
</tr>
<tr>
<td>Gill nets and entangling nets</td>
<td></td>
<td><strong>2 714</strong></td>
<td><strong>6 175</strong></td>
<td><strong>8 889</strong></td>
<td><strong>19%</strong></td>
<td><strong>44%</strong></td>
</tr>
<tr>
<td>LHP</td>
<td>Hand lines and pole lines (hand-operated)</td>
<td>20</td>
<td>336</td>
<td>356</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>LLS</td>
<td>Set longlines</td>
<td>5 083</td>
<td>2 352</td>
<td>7 435</td>
<td>36%</td>
<td>17%</td>
</tr>
<tr>
<td>LTL</td>
<td>Troll lines</td>
<td>8</td>
<td>72</td>
<td>80</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Hooks and lines</td>
<td></td>
<td><strong>5 111</strong></td>
<td><strong>2 760</strong></td>
<td><strong>7 871</strong></td>
<td><strong>37%</strong></td>
<td><strong>20%</strong></td>
</tr>
<tr>
<td>TBB</td>
<td>Beam trawl</td>
<td>14</td>
<td>116</td>
<td>130</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>OTB</td>
<td>Bottom otter trawl</td>
<td>3 246</td>
<td>275</td>
<td>3 521</td>
<td>23%</td>
<td>2%</td>
</tr>
<tr>
<td>PMT</td>
<td>Pelagic pair trawls</td>
<td>5</td>
<td>230</td>
<td>235</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>Trawls</td>
<td></td>
<td><strong>3 265</strong></td>
<td><strong>621</strong></td>
<td><strong>4 886</strong></td>
<td><strong>23%</strong></td>
<td><strong>4%</strong></td>
</tr>
<tr>
<td>PS</td>
<td>Purse seines</td>
<td>2 156</td>
<td>602</td>
<td>2 758</td>
<td>15%</td>
<td>4%</td>
</tr>
<tr>
<td>Surrounding nets</td>
<td></td>
<td><strong>2 156</strong></td>
<td><strong>602</strong></td>
<td><strong>2 758</strong></td>
<td><strong>15%</strong></td>
<td><strong>4%</strong></td>
</tr>
<tr>
<td>SB</td>
<td>Beach seines</td>
<td>1</td>
<td>153</td>
<td>154</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Seines</td>
<td></td>
<td>1</td>
<td>153</td>
<td>154</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>NK</td>
<td>Gear unknown (1)</td>
<td>0</td>
<td>46</td>
<td>46</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>NO</td>
<td>No gear (2)</td>
<td>0</td>
<td>3 535</td>
<td>3 535</td>
<td>0%</td>
<td>25%</td>
</tr>
</tbody>
</table>

Regulation (EC) No 26/2004
- (1) Not valid for all vessels in fleet or reported from 1 January 2003.
- (2) Valid only for subsidiary fishing gear.

Source: Own from Community Fishing Fleet Register

The most commonly used gear is set longlines (36% of boats), bottom otter trawls (23%), anchored or set gillnets (18%) and purse seines (15%). However, anchored gillnets predominate as subsidiary gear (42% of boats), while set longlines are only used as subsidiary gear by 17% of boats.

Which main and subsidiary gear is used partly depends on the size of the boats. This table shows the percentage of boats above and below 12 metres that use different types of fishing gear.
The main gear used is very different depending on the length of the boat. The main gear most commonly used by boats below 12 metres long is set longlines (50% of boats in this sector), followed by anchored gillnets (26%) and purse seines (17%). However, in the category of boats that are more than 12 metres long, the predominant main gear is bottom otter trawls (64% of boats in this fleet category), followed by dredges (13%), purse seines (12%) and set longlines (8%).

There are also differences between fleet categories in the use of secondary gear. In the case of boats below 12 metres, anchored gillnets are declared by 53% of boats, and set longlines by 16%. However, in the case of boats longer than 12 metres, there is a greater diversity. The most commonly declared gear is set longlines (19% of boats longer than 12 metres) followed by anchored gillnets (19%), purse seines (12%), pelagic pair trawls (5%) and bottom otter trawls (5%).

Boats that use set longlines as their main gear have an average length of 7.4 metres, their average tonnage is 3.0 tonnes and their average power is 3.7 kW. Boats that use bottom otter trawls as their main gear are smaller. Their average length is 17.5 metres, their average tonnage is 43.8 tonnes and their average power is 34.1 kW. The average length of the boats that use anchored gillnets as their main gear is 6.7 metres, their average tonnage is 1.8 tonnes and their average power is 2.4 kW. The use of purse seines is typical of boats with an average length of 10 metres, an average tonnage of 12.5 tonnes and an average power of 11.4 kW.

The cases in which no subsidiary gear is declared point to a degree of specialisation in only two types of gear. This applies to 13% of boats that only use anchored gillnets, and 10% that declare...
only using bottom otter trawls. The boats that specialise in using anchored gillnets are small, with an average length of 6.8 metres, an average tonnage of 1.8 tonnes and an average power of 24.3 kW. However, boats specialising in bottom otter trawling are larger. Their average length is 20 metres, their average tonnage is 59 tonnes and their average power is 236 kW. The most commonly used subsidiary gear is anchored gillnets (41% of boats), followed by set longlines (18%).

A total of 72% of boats declare several types of gear. The most common combination is using set longlines as the main gear and set (anchored) gillnets as subsidiary gear. In all, 35% of Italian boats declare that they use this combination of gear. These vessels are generally less than 12 metres long.

The combination of purse seines as the main gear and set longlines as subsidiary gear is declared by 13% of boats, and is most common in small boats. In between 2% and 4% of declarations made for boats, the main gear is bottom otter trawls combined with purse seines, set longlines, anchored gillnets or pelagic pair trawls. There are three types of combinations of gear that each represent 2% of the boats. These are: dredges with bottom otter trawls and anchored gillnets with hand-operated hand lines and purse seines with anchored gillnets. Finally, in 1% of declarations there are the combinations of dredges with anchored gillnets, set longlines with driftnets, anchored gillnets with beach seines and driftnets with anchored gillnets.

6.2. Fishing methods

Given the many different types of gear used by the majority of the Italian fleet, classifying boats by fishing method is very complex. It should be pointed out that the small-scale fishing category, which makes up the majority of the Italian fishing fleet, is poorly defined. While the FAO estimates that it represents 75% of the fleet, IREPA considers that it is only 65%. It is true that the dividing line between industrial and small-scale fishing is not always well defined. If small-scale fishing were considered to be fishing by boats shorter than 12 metres, the small-scale fishing category would represent 68% of the fishing fleet. However, for the purpose of regional standardisation, the 21st Session of the General Fisheries Council for the Mediterranean agreed to set the minimum length at 15 metres in order to promote compliance with international conservation and structuring measures by fishing boats that fish on the open sea. According to this agreement, Italian boats more than 15 metres long should be considered as industrial. Currently, 78% of the Italian fishing fleet is less than 15 metres long, and according to the criterion used by the General Fisheries Council for the Mediterranean, it should be considered as small-scale. Below is a distribution proposed by IREPA.

**Trawlers**: Trawling is one of the methods that guarantees the highest technical and financial performance. According to IREPA, the trawling fleet consists of 2,507 boats, which is 16% of the fleet. However, 25% of boats have declared that they use trawls as their main gear. It is possible that IREPA classified a proportion of the trawlers as polyvalent boats. However, according to the Community Register, only 9% of the trawlers declare that they do not use any other type of subsidiary gear.

The size of these boats is very variable and they catch a wide range of species, but in general their tonnage is considerably greater than the average for the Italian fishing fleet. They provide 28% of the total catches and 38% of the total value of landings. It is a growing fleet category, even though its catches are decreasing in terms of both volume and value. The boats have an average age of 25 and employ an average crew of 3.8 fishermen.

The highest concentration of trawlers is in Sicily, and to a lesser extent in Puglia. These two regions are the bases for around half of the Italian trawling fleet. In Sicily the activity of the
Mazara del Vallo trawlers is particularly significant as they produce 57% of the total Italian trawling catches, mainly focusing on white shrimp. Although trawling has been done along the Adriatic coast, it has to deal with the area restrictions in the Adriatic.

The main catches made with trawls are hake, white shrimp and mullet. These three species represent around 30% of catches made using this fishing method. There are, however, regional differences, with greater catches of crustaceans in the Adriatic, and fish in the Tyrrhenian.

**Pelagic fleet:** The pelagic fleet consists of 340 boats that represent 2% of the fleet and 8% of total GT, using various types of gear. This category lands a large volume of small pelagic fish (80%), mainly anchovies and sardines, and represents 27% of total landings. It is made up of seine boats concentrated around Sicily and the Tyrrhenian and pelagic pair trawlers that fish exclusively on the Adriatic coast.

The Italian pair trawling fleet represents 1% of the fleet and 4% of total GT. It is one of the most efficient categories in terms of catches per unit of effort. It has an average crew of 6 men with an average age of 21.

This fleet catches small pelagic species (80%), mainly anchovies and sardines, which represent 16% of total landings. Anchovies represent 57% of catches in this category, sardines 26% and mackerel 10%. In direct sales there are major price differences between regions, as a result of differing preferences among local consumers. There is a stable demand in the Tyrrhenian and Sicily, although with major price fluctuations. Consequently, the majority of catches are for export (mainly to Spain and France) or processing.

The seine fleet also represents 1% of the fleet and 4% of total GT, and employs 3.4% of Italian fishermen. This method is used by a wide variety of boat sizes. The smaller boats fish near the coast and are less dependent on the seasonal availability of the small pelagic fish (anchovies and sardines). This category lands a large quantity of small pelagic fish. Normally they fish at night, over a 12-hour period.

**Dredgers:** With the exception of a few boats that fish in Campania and Lazio, this category fishes almost exclusively along the central and northern Adriatic coast and consists of 711 boats, representing 4% of the total number of boats and 4% of total GT. However, in the Community Register this figure is slightly higher (770 boats and 5% of tonnage). This type of fishing is very specialised, and mainly catches striped venus (*Chamelea gallina*). The boats are an average of 18 years old, making it one of the categories with the lowest average age, and their average crew is two fishermen. The landings per boat are defined by local consortiums (a self-management system), which establish quotas and days at sea according to the state of resources and the market.

**Small-scale fishing:** small-scale fishing is the Italian fleet category with the most boats, representing 65% of the total fleet. This category is made up of boats that are shorter than 12 metres, which use passive types of gear, and especially fixed nets.

The activity of this category is very flexible depending on the season, the situation of resources or weather conditions. Although flexibility is a strong point for this sector, it is also an indicator of its sensitivity to weather conditions or poor resources. It is a multi-species type of fishing in which winkles, cuttlefish, octopus and swordfish play a very significant role.

Small-scale fishing produces more than 25% of landings and represents 50% of employment with an average crew of 2 fishermen. The average income is low, but these boats play an important economic role in some areas that are dependent on fishing.
**Polyvalent boats:** Polyvalent boats are typical of Mediterranean fishing, adapting to the demands of the market in each season. In principle, any boat that declares that it uses several types of gear could be considered as a polyvalent boat. Using these criteria, 76% of the Italian fishing fleet should be considered as polyvalent. However, IREPA has carried out a reclassification, comparing permits to use gear with the systems that are actually used.

According to the classification carried out by IREPA, this category consists of 3,631 boats, which represent 23% of the fleet and 16% of total GT. Length varies between 4 and 33 metres, although 70% are shorter than 12 metres. This category produces 16% of the value of landings. The boats, with an average age of 21, employ an average crew of 3 men.

**Tuna fishing:** There are 212 boats with permits to fish for bluefin tuna (*Thunnus thynnus*), shared practically 50% between longline and seine boats. This category represents 1% of the total number of boats and 6% of total GT. Tuna fishing is a seasonal activity. During the remainder of the year, the smallest boats use other gear: trawling nets or fixed nets to fish demersal fish and crustaceans, while the larger tuna seine boats stay moored up.

Catches of bluefin tuna are subject to individual quotas. The quota for bluefin tuna for 2006 was 4,880 tonnes. In total, 80% of the Italian quota is allocated to seine boats and 10% to longline boats. Although bluefin tuna is the target species, the boats also catch other large pelagic fish such as albacore tuna and swordfish.

The boats that use longlines fish mainly in the Tyrrhenian Sea. Out of these, the Sicilian boats are generally larger. They operate throughout the year and the target species vary between bluefin tuna, swordfish or other types of tuna. In fact, more than 30% of catches by this fleet category are swordfish, 15% albacore tuna and 14% bluefin tuna. Fishing with longlines by boats longer than 24 metres stops between 1 June and 31 July.

Seine fishing is done in the southern Tyrrhenian Sea and the Ionic Sea. The 23 seine boats in the *Associazione dei produttori tonnieri di Salerno*, with an average tonnage of 193 tonnes, fish from April to September and stay moored up for the rest of the year. The remainder of the boats in southern Sicily work more consistently, as during the winter they concentrate on catching anchovies, and in spring and summer on tuna.

6.3. Fishing tourism

Fishing tourism was introduced by Article 27 of Law 41/82, which stated that ‘non-fishermen may be permitted on fishing boats [...] for tourism and recreational purposes’. This is regulated by the Ministerial Decree of 13 April 1999. Although initially small-scale fishing was the most suitable for fishing tourism, the legislation opened up the possibility to other categories, such as trawling. However, it is so difficult to adapt these boats to accommodate tourists that currently small-scale fishing is the only category interested in fishing tourism.

The profitability of fishing tourism is very variable depending on the area, season and size of boat (they can take a maximum of twelve tourists). The AGCI estimates that fishing tourism can increase fishermen’s incomes by between 10 and 30%.

7. Fisheries management

The structural and market measures defined under the common fisheries policy (CFP) have been adopted and applied in the Mediterranean in the same way as in other areas of the Community. However, the application of some of the measures under the monitoring policy has been
postponed and CFP conservation policy measures have traditionally been implemented in a
different way in different areas. For example, the system of TACs (total allowable catches) and
quotas, the main conservation tool of the CFP, has not been applied in the Mediterranean basin.
Only bluefin tuna has been governed by this system in the Mediterranean, and only since 1998.
Otherwise, some elements of the CFP, such as the logbook, have been introduced in the
Mediterranean after the Atlantic.

This situation has traditionally been justified by the specific characteristics of the
Mediterranean. After a process lasting almost three years, and with France abstaining, the
Council adopted Regulation (EC) No 1967/2006 concerning management measures for the
sustainable exploitation of fishery resources in the Mediterranean Sea.

The Regulation:
• introduces new technical measures to improve the selectivity of the current 40 mm mesh size
  for towed nets;
• strengthens the current ban on the use of towed gear in coastal areas;
• limits the overall sizes of certain fishing gear that affects fishing effort;
• introduces a procedure for establishing temporary or permanent closures of areas to specific
  fishing methods, either in Community or international waters;
• provides for the adoption of management plans combining the use of effort management with
  technical measures;
• allows EU Member States to regulate, in their territorial waters and under certain conditions,
  fishing activities that do not have any significant Community dimension or environmental
  impact, including certain local fisheries currently authorised under Community law.

The Regulation also:
• provides for the introduction of 40mm square mesh of bottom trawls and, under certain
  circumstances, diamond meshed net of 50 mm by 1 July 2008 at the latest;
• authorises trawling activities under certain conditions, between 0.7 and 1.5 nautical miles,
  even though the general rule still involves a ban on the use of trawl nets;
• authorises purse seines to be temporarily used until 31 December 2007 at a distance from the
  coast of less than 300 metres or at a depth less than the 50 metres isobath, but not less than
  the 30 metres isobath.

7.1. Legal and institutional framework

The authority responsible for monitoring and compliance with national and EU policy is the
Ministry of Agriculture Direzione Generale della Pesca e dell'Aquacoltura. Other ministries
have responsibilities associated with the monitoring and control of fisheries: the Ministry of
Defence, with the coastguard, the navy and the carabinieri; the Ministry of the Interior, with the
police; the Ministry for the Economy and Finance, with the Guardia di Finanza; and the
Ministry for Health, which is responsible for public health and veterinary services.

Since 1997 there has been a process of administrative decentralisation aimed at consolidating
the autonomy of local authorities. The Italian regions therefore have some legislative
responsibilities, especially those that have the most autonomy, such as the Regioni a statuto
speciale (Sicily, Sardinia and Friuli-Venezia Giulia). The Ministry of Agriculture is responsible
for the central administration, managing the fleet and national fishery resources and for leading,
coordinating and planning. The local authorities have responsibility for certain matters that were
previously managed by the Directorate-General for Fisheries and Agriculture: the development
and protection of resources, aquaculture, maintaining the fishing ports, processing, trade and
fishing in internal waters. The administrative functions are carried out at regional and local level
by the Capitanerie di Porto and the Guardia Costiera.
The current management measures are aimed at ensuring viable use of the resources, limiting the fishing effort, protecting biodiversity, developing aquaculture and applying the FAO code of conduct for the fisheries that are responsible. The main objectives of the national plan for 2003-2006 are:

- Streamlining the sector in order to achieve a balance between the fishing effort and the resources. This needs to be achieved by reducing the capacity of the fleet, and applying technical measures, such as temporary closures. The plan is to involve the sector in applying the management measures.
- Streamlining the administrative system, by decentralising responsibilities to the local authorities (regions).
- Improving the level of self-sufficiency through regulations generally aimed at correct use of coastal and pelagic species, the development of aquaculture and the protection and improvement of national production.
- Maintaining employment levels.

The basic legislation is in Law 963/1965 and the Decrees of the President of the Italian Republic No 1639/1968 on the ‘Regulation for the implementation of the Law of 14 July 1965’ and No 963, regarding the ‘discipline of marine fishing’.

These provisions delegate the adoption of subsidiary legislation for some sectors. This secondary legislation includes other regulations (Decreti legislativi) adopted by the executive, and ministerial decisions (Decreti ministeriali) adopted by the relevant ministers. Aquaculture and environmental protection are regulated by Law No 152 on the management and monitoring of water quality and Laws No 66 of 1993, No 110 of 1995 and No 47 of 1997 regulating the use of drugs.

7.2. Management measures

Italy, like the other EU Member States, has applied the reduction of fleets to adjust the fishing effort to the volume of resources available. While some bodies consider that the reduction in the capacity of the fleet has had a beneficial effect on the state of resources, fishing syndicates and cooperatives have rejected any further reduction on several occasions, as they consider that it has no effect on resources.

In spite of the application of different management measures since 1988, various resources such as hake, red mullet and deepwater rose shrimp are being over-fished. In 2006 the STECF\(^1\) stated that the analysis of the effects of the plans presented by the Sicilian and Sardinian authorities was comprehensive, whereas that presented for the Italian mainland was incomplete. The STECF stated that the three plans lacked measurable objectives and that the positive effects of the management measures may have been compromised by a series of factors, such as the increase in the fishing capacity of the fleet, technological improvements or inadequacy in the design and implementation of the management measures.

The STECF recommended that for the seasonal fishing bans to be effective, they should be applied for a continuous period and to all relevant fishing methods. They should also be extended to large areas in order to minimise the transfer of effort to adjacent areas, especially to international waters.

\(^1\) SEC(2007)466.
Moreover, in order to strengthen the management measures it recommended a progressive reduction of the effective fishing capacity of the fleet, the establishment of permanent closed areas in sufficiently large areas and an increase in gear selectivity.

7.2.1. General permit system

The resource conservation policy is based on a general permit system. All boats, whatever gear they use, need a permit to fish, and for some fisheries, authorisation is needed from the Ministry of Agriculture Fishery Directorate. In 1989, the administration imposed a moratorium and no new permits have been granted.

7.2.2. Seasonal restrictions

Seasonal restrictions have been a traditional management tool for Italian fisheries. Annually there is a seasonal closure for pelagic trawling and bottom trawling, the duration of which varies from one year to the next.

A Ministerial Circular of 7 October 2004 established a plan to reduce the fishing effort, particularly for fishermen using trawling nets less than 6 nautical miles from the coast.

Trawling is stopped on Saturday and Sundays, but there are no restrictions currently in place for other fleet categories.

7.2.3. Other restrictions on boats and gear

A limit of 10 GT has been introduced for boats used to fish for bivalves and ‘Bianchetto’ (juveniles of Sardina pilchardus).

7.2.4. Individual quotas

For Italian fisheries quantitative restrictions have only been established for some sedentary species (some bivalves) or some highly migratory species (bluefin tuna). Tuna fishing is regulated by the International Commission for the Conservation of Atlantic Tunas (ICCAT), which establishes annual maximum permitted catch quotas for the Italian fleet.

The TAC for bluefin tuna is distributed between longline, seine, leisure fishing and UNCL (quotas for possible compensation). The boats that fish tuna with longlines or seines have to be registered with the Directorate-General for Fisheries and Aquaculture. The TACs for longlines are determined on the basis of the best two years out of the four registered for each boat in the 1995-98 period. The total annual quota for seines is distributed between the boats by applying a series of weightings.
7.2.5. **Fishing for juveniles (novellame)**

There are specific instruments for some fisheries such as juvenile sardines. The use of trawl, seine or similar nets is banned less than three nautical miles from the coast except in cases when there is a specific derogation to national legislation. This is the case of ‘Bianchetto’ (juveniles of *Sardina pilchardus*) and transparent goby (‘Rossetto’, *Aphia minuta mediterranea*), which are considered as ‘special fisheries’. These fisheries take place during the winter for 60 days, in general from 15 January to 15 March. They are traditional fisheries, are an important activity for small-scale fishing and have a high socio-economic impact at local level.

More than 20 protected marine areas have been created, distributed all along the coast. A Ministerial Decree of 20 June 2003 provided for the creation of biological protection areas in order to reduce the fishing effort for juveniles of important commercial species such as hake.

7.2.6. **Bivalve fishing**

Between the 1980s and the beginning of the 1990s there was an increase in fishing capacity, leading to overfishing.

Bivalve fishing with trawls is regulated by the Ministerial Decree of 21 July 1998, which established a self-management system based on:

- Transferring responsibility from the central administration to boat owners;
- Reconstituting bivalve populations and establishing a viable relationship between the fishing effort and resources.

For this purpose local management coordination committees have been established, replacing the National Management Committee. These committees are authorised by the central administration to determine daily catch quotas, the number of days of fishing per week, fishing hours, seasonal closures, maximum landings, the rotation of fishing areas, catch quotas per species, permitted gear, landing points and repopulation areas. An Interconsortium Committee has also been created to improve coordination and standardise catches and commercial flows between members. Granting of permits has also been frozen until 1 January 2009.

In summary, it is a decentralisation process, along with a self-management system based on allocating territorial usage rights. The application of this system has resulted in an increase in prices, a reduction in operation costs and more reasonable resource management.

Two ‘vongole’ plans have also been established, with an overall allocation of 63 million euros. While the first mainly worked on repopulation, the second focused on completely giving up the activity, introducing technical closures in 1997 and 1998.

7.2.7. **Sport fishing**

Sport fishing is not regulated in a standard way in Italian legislation. Although the Ministerial Decree of 26 July 1995 establishes the need for a permit for professional fishing, there are no rules on permits for sport fishing. Sport fishing is included in the general context of fishing, the core of which is Law No 963/1965. Article 7 establishes the distinction between professional, scientific and sport fishing.

Sport fishing for bluefin tuna requires registration with the Directorate General for Fisheries and Aquaculture. A total of 1,826 sport fishermen have applied for catch quotas for bluefin tuna. From 1 May to 30 September, catches are limited to one per week per boat.
There is no data on the number of sport fishermen on the sea, as unlike freshwater fishermen they do not need permits. CNR-IRPEM, using information from the Capitanerie di Porto, estimates that there are one and a half million sport fishermen fishing from boats. This is in addition to those who fish from the coast or underwater. Due to the recreational nature of this activity, the majority of catches are during spring, summer and autumn, with the peak of activity in summer. This activity is geographically focused around tourist centres near to the large urban centres (Lazio).

The first problem with sport fishing is that it competes with professional fishing for access to the same resources. There is also a financial problem resulting from the introduction of high price products, frequently ‘on the black market’ on the commercial circuit or directly to restaurants.

8. Ports

<table>
<thead>
<tr>
<th>Regional distribution of fishing ports</th>
<th>No Ports</th>
<th>% Ports</th>
<th>Boats/port</th>
<th>GRT/port</th>
<th>kW/port</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abruzzo</td>
<td>11</td>
<td>4%</td>
<td>52</td>
<td>943</td>
<td>4 399</td>
</tr>
<tr>
<td>Calabria</td>
<td>35</td>
<td>11%</td>
<td>26</td>
<td>184</td>
<td>1 395</td>
</tr>
<tr>
<td>Campania</td>
<td>37</td>
<td>12%</td>
<td>32</td>
<td>362</td>
<td>2 220</td>
</tr>
<tr>
<td>Emilia-Romagna</td>
<td>10</td>
<td>3%</td>
<td>80</td>
<td>1 017</td>
<td>8 079</td>
</tr>
<tr>
<td>Friuli-Venezia Giulia</td>
<td>8</td>
<td>3%</td>
<td>58</td>
<td>272</td>
<td>3 649</td>
</tr>
<tr>
<td>Lazio</td>
<td>13</td>
<td>4%</td>
<td>47</td>
<td>633</td>
<td>4 521</td>
</tr>
<tr>
<td>Liguria</td>
<td>43</td>
<td>14%</td>
<td>13</td>
<td>92</td>
<td>837</td>
</tr>
<tr>
<td>Marche</td>
<td>15</td>
<td>5%</td>
<td>62</td>
<td>1 311</td>
<td>6 659</td>
</tr>
<tr>
<td>Molise</td>
<td>1</td>
<td>0%</td>
<td>62</td>
<td>2 228</td>
<td>9 908</td>
</tr>
<tr>
<td>Puglia</td>
<td>29</td>
<td>9%</td>
<td>60</td>
<td>931</td>
<td>5 558</td>
</tr>
<tr>
<td>Sardinia</td>
<td>21</td>
<td>7%</td>
<td>69</td>
<td>675</td>
<td>4 795</td>
</tr>
<tr>
<td>Sicily</td>
<td>54</td>
<td>17%</td>
<td>63</td>
<td>1 182</td>
<td>5 329</td>
</tr>
<tr>
<td>Tuscany</td>
<td>27</td>
<td>9%</td>
<td>24</td>
<td>235</td>
<td>1 742</td>
</tr>
<tr>
<td>Veneto</td>
<td>9</td>
<td>3%</td>
<td>93</td>
<td>1 428</td>
<td>9 938</td>
</tr>
<tr>
<td>TOTAL</td>
<td>314</td>
<td>100%</td>
<td>45</td>
<td>640</td>
<td>3 758</td>
</tr>
</tbody>
</table>

*Source: Own from Community Fishing Fleet Register*

The landing points are very scattered along the coast. Out of a total of 800 landing points, nearly 75% are simply mooring points, such as natural harbours, beaches and small quays used by small-scale fishing boats. Only 314 ports play an administrative role.

The geographical distribution of the ports differs from that of the fleet, and their characteristics are very variable. As shown in the table, the ports in the northern Adriatic (with the exception of the ports of Friuli-Venezia Giulia) have a higher number of boats, which, in general, have a greater tonnage and power, although they only represent 9% of the ports. Sicily has 17% of the ports, and like in the Adriatic, they have more and larger boats than the average for the country. The small ports are mainly in Liguria, Tuscany, Calabria and Campania.

The main fishing port in terms of volume landed is Mazara del Vallo (south-eastern Sicily), followed by Ravenna (northern Adriatic), Ancona (central Adriatic), Bari (southern Adriatic), Palermo (south-eastern Tyrrhenian) and Chioggia (northern Adriatic).
9. Use of production

The total supply of fisheries products for the Italian market, including imports, is around 1.4 million tonnes per year. In terms of value, Italy is the fifth largest import market.

9.1. Marketing

In recent years, purchasing habits have undergone significant changes. Firstly, certain changes in society favour large suppliers over traditional ones, and this trend is supported by the gradual increase in the consumption of frozen, semi-preserved, prepared and semi-prepared products.

Large suppliers can offer fresh products, frozen, preserved or semi-prepared products as well as a whole range of other products. Traditional fishmongers are limited, however, to offering fresh fish. As a result, there is a structural trend of traditional fish shops seeing their role as a special channel for domestic consumption being eroded.

Although fishmongers still retain a considerable share of the market in marine species, molluscs and crustaceans, the large suppliers account for almost 70% of the volume of freshwater species. The rate at which the market share is moving from traditional to large suppliers may have slowed somewhat, but the trend is still evident. However, the market share for trade at markets remains stable.

9.2. Processing

Although the fisheries product processing industry is significant, its size is not proportional to either the length of Italy’s coastline or its population. The reduction in catches and aquaculture production has led to changes in the processing industry, which is increasingly reliant on imported raw materials.

Since 2006 the Member States have had to give the Commission information on the processing industry. Currently the information available for Italy is based on the censuses that are carried out every ten years. The last census was in 2001.

In recent years, Italian fisheries product processing companies have undergone two simultaneous processes, either towards fragmentation or towards the strengthening of large groups, as a result of restructuring and mergers. Large factories have therefore appeared, often linked to distribution companies, financial companies or multinational food groups, along with a majority of factories that are constantly decreasing in size.
The distribution of the number of employees clearly reflects this dual structure of the sector: 62% of factories have fewer than 10 employees, and only 3% of factories have more than 100 employees. However, this 3%, represented by the larger companies, generates 36% of the employment in this sector.

Often smaller companies opt for products with high added value, while the large factories base their business strategy on importing semi-processed products or frozen fish at low tariffs, even establishing vertical integration companies. The position of the large factories in relation to distribution, due either to their business links or to their size, enables them to adapt better and faster to consumer preferences.

According to the 2001 census, the Italian fisheries product processing industry generates 6,640 jobs, with an average of 16 employees per factory, while in 1981, the average staff of these companies was 29 employees. Although there has been a slight increase in the number of companies since the 1991 census, employment has fallen by 13%.

Throughout the sector there has been a decrease in the average size of companies. However, this process is much more marked in family businesses or in small or medium-sized factories. In this case, the main problems are with raw materials, in terms of their availability, price or compliance with standards. Other problems affecting smaller factories are an increase in costs in the absence of restructuring or pressure from distribution chains.

In any case, small-scale businesses play an important role. While in the 1991 census, this category was represented by 89 businesses with 470 employees, in 2001 there were 143 businesses with 761 employees.

ISTAT statistics separate fisheries product processing into two groups. The first category is made up of activities associated with the conservation of fish, crustaceans and molluscs (frozen, tinned, smoked, salted, in brine, etc.) and the second comprises the preparation of products based on fish, crustaceans and molluscs (precooked, fillets, roe, etc.).

The conservation activities are carried out by larger, often multinational companies, while the preparation activities are conducted by traditional, smaller companies. The conservation activities also generate more jobs (5,078) than the preparation activities (1,562). However, since the 1991 census the generation of employment has been very different. While employment in conservation activities has fallen by 28%, in preparation activities it has increased by 141%. Therefore over ten years, the share of conservation activities in total employment by the processing industry has decreased from 92% to 76%, while the share of preparation industries has increased from 8% to 24%. The number of companies associated with conservation activities has been reduced by 8%, while preparation factories have increased by 162%.

These structural changes have manifested themselves in very different ways in different regions. The south has had the majority of the increase in activity in industries associated with preparation (rising to a 40% share in this activity), while the reduction in the activity of conservation industries (-3% of the number of companies and +6% of employment) has been much less intense than in the north.

Conservation activities predominate in the south, and despite the 10% drop in its activity, Sicily has the largest number of companies (32%) and the highest volume of jobs (27%). However, the companies in Sicily are smaller (14 employees) than in Lombardia (60).
Companies involved in preparation are concentrated in the central and northern areas (31% of the companies in Emilia-Romagna, Tuscany and Marche). However, the largest companies are in Veneto (39 employees on average).

Canned products play a fundamental role in fisheries product processing, and canned tuna represents around 70% of the volume of canned products and around 60% of its value. Anchovies in brine represent 9% of the volume and 8% of the value, and anchovies in oil represent 7% of the volume and 9% of the value.

In the past, the Italian canned tuna market was supplied solely by domestic production. In 1992 the Italian tuna processing industry was the fourth largest in the world, with 93 000 tonnes, after the United States (273 800 tonnes), Thailand (243 600) and Japan (98 100). As a result of the high prices of imported tuna and the increase in production costs, the Italian industry has become less competitive compared with developing countries. Canned tuna imports have increased and canned tuna production in Italy decreased by 23% between 1992 and 2002. Following the purchase of large Italian canning companies by international groups (Nostromo by Calvo, Star by Jealsa, Mareblu by Heinz), a large proportion of can production was transferred to other countries, although those companies maintain their commercial brands on the Italian market.

Currently the Italian canned tuna industry depends on imported material, both whole and as loins. Italian imports increased by 130% in quantity and 170% in value between 1992 and 2003. The supply of raw materials has changed radically and rapidly. Imports of frozen tuna decreased by 60% between 1992 and 2003 (from Taiwan, Spain and France) and imports of tuna loins doubled in the same period (from Ecuador, Colombia, Kenya and Thailand). The main countries of origin are: Spain for Nostromo and Star, Côte d’Ivoire for Rio Mare and the Seychelles for Mareblu.

If the current tariff for canned tuna (24%) were reduced further in the WTO negotiations on non-agricultural products, Italian production would be seriously at risk. Production from South-East Asian countries (mainly Thailand and the Philippines) has major competitive advantages such as:

- The supply opportunities due to proximity of the Eastern Pacific;
- The lower costs for fleets in Taiwan and Korea;
- The logistical and maritime transport advantages;
- The low labour costs in factories that are already large.

At present the majority of Italian production is by Rio Mare (Trinity – Bolton) in Cernenate and Milan; Palmera in Sardinia and Maruzella in Marana Lagunare. Italy has developed products with high added value, such as preparations for pasta and tuna pâté. Some small businesses are still making traditional products such as yellowfin tuna fillets in oil in glass jars, tuna belly and canned Atlantic bluefin tuna.

Other important productions include around 12 000 tonnes of anchovies, 2 400 tonnes of clams, 2 000 tonnes of canned sardines and around 16 000 tonnes of other types of canned fish.

10. External trade

The deficit in the trade balance of fisheries products is increasing year after year. The increase in consumption per capita, and the gradual decrease in catches have led to a major increase in
imports, and a significant reduction in exports. The trade deficit is more than 800 000 tonnes, with a value of more than 2 900 million euros.

Traditionally, Italy used to import products with a high average price and export products with a lower value. However, the price of exports has increased more quickly than that of imports, and since 2002, following the crisis in prices for sea bass and sea bream, there have been signs of stabilisation of the average prices in both areas. More than half of imports of fisheries products come from the EU, divided between Spain (19%), France (7%), Denmark (7%), Holland (6%) and Greece (5%). Most imports from third countries come from Chile, Argentina, Peru and Ecuador. Imports of processed cephalopods and fish from Thailand have also increased considerably in recent years.

Imports of fisheries products are divided between molluscs (28%), processed products (23%), frozen fish (17%), fresh fish (14%) and crustaceans (9%). Fisheries products for animal feed or for other purposes represent around 10% of total imports. The majority of exports are to Spain (42%), France (13%), Germany (9%) and Greece (7%).
11. Research

The majority of basic research into fisheries and aquaculture is done by various university institutes. Other public institutes such as the National Research Council (CNR – Consiglio Nazionale delle Ricerche), the Central Institute for Scientific and Technical Research Applied to the Sea (ICRAM – Istituto Centrale per la Ricerca scientifica e tecnologica Applicata al Mare) and the Agency for New Technologies, Energy and Environment (ENEA – Ente per le Nuove tecnologie, l'Energia e l'Ambiente) conduct applied research and collect data. The main fisheries research centres are the CNR centre in Ancona, in the Adriatic, in Mazara del Vallo, and the Sicilian Channel. Some producer organisations also conduct applied research.

Economic and market information used to be collected and processed by ISTAT (Istituto Nazionale di Statistica), ICRAM and IREPA (Institute for Economic Research into Fisheries and Aquaculture – Istituto Ricerche Economiche per la Pesca e l’Acquacoltura). In 2002 a programme was started to collect data in accordance with EU Regulations (EC) Nos 1543/2000 and 1639/2001. As a result, after 2005 data on catches and average prices ceased being the responsibility of ISTAT, and is collected by IREPA.

The main sources of State funding for research projects on fisheries and agriculture are the Ministry of Agriculture (Ministero per le Politiche Agricole) and the CNR.

Since 1985, research into demersal resources has been based on annual surveys of trawlers conducted in the Italian EEZ. There are two projects: GRUND, funded by the Italian Ministry of Agriculture, and MEDITS, funded by the EU since 1994.

Research into marine biological resources is conducted by various bodies, both private and public (CNR, SIBM, IREPA, UNIMAR, ICRAM).

The Società Italiana di Biologia Marina (SIBM) is a framework for relations between researchers who work on marine biological resources, organising meetings and seminars, and managing various national and international research programmes. It also publishes an international research review (Biologia Marina Mediterranea).

The National Plan for Fisheries and Aquaculture planned to fund research in six areas between 2003 and 2006: biological resources, fishing technology, aquaculture, the healthiness and quality of fishery and aquaculture products, the fishing and aquaculture economy and the sociology of fishing and aquaculture.

In accordance with the three-year plan, in 2003 the Directorate-General for Fisheries and Aquaculture approved 71 research projects: biological research (43), aquaculture (19), healthiness and quality of fishery and aquaculture products (9). These projects include the following, which are concerned with establishing a viable framework for fisheries:

- **FISBOAT** (EU project). Operative research into fishing.
- Identification of management measures in eleven biological protection areas (closed areas) as part of sustainable fishing.
- **NURSERY**. Spatial and seasonal identification of reproduction areas along the Italian coast.
- **BIRDMOD**. Developing a bio-economic model for demersal fishing.
- Developing a multidisciplinary approach to breeding tuna in captivity.
In accordance with Regulations (EC) Nos 1543/00 and 1639/01 and the Italian National Programme, the following activities have been carried out:

**MODULE A.** Evaluation of input:
- Fishing capacity;
- Fishing effort.

**MODULE B.** Evaluation of catches and landings (demersal, large and small pelagic, molluscs):
- Catches and landings;
- Evaluation of discarded catches;
- Collecting data on recreational tuna fishing;
- Collecting data on catches per unit of effort and/or efficiency of specific fleet categories;
- Scientific stock evaluation programmes. MEDITs and GRUND;
- Research into tuna and swordfish using marking;
- Biological sampling of catches: distribution by age and length.

**MODULE C.** Evaluation of the economic situation of the sector:
- Economic data by group of boats.

Italy also plays a major role in the activities of the FAO, in the regional projects AdriaMed and MedSudMed.

**12. Organisation of the sector**

In 2007 in Italy there were 37 fish and aquaculture producer organisations, which was a substantial increase from the 19 producer organisations that existed in 1993. Naturally producer organisations evolve, with some disappearing, some changing their names, and others being created or merging, etc. For example, practically half (9) of the producer organisations that existed in 1993 have disappeared, while 76% of the current organisations (28) have been created since 2001.

There are 10 producer organisations dedicated to local fisheries. A further six focus on coastal fishing, five on bluefin tuna, three on aquaculture and two on bivalve fishing.

In all, 62% of the producer organisations (23) focus their activity on the Adriatic. Marche is the region with most producer organisations (seven), representing 21% of the total. It is followed by Emilia-Romagna, with six producer organisations (16% of the total). In Lazio there are five producer organisations (14% of the total). Out of these, three are based in Rome in order to be close to the administrative centres. They are associations of producer organisations (Associazione di Organizzazioni di Produttori FEDER OP.IT), ocean fishing producer organisations (Organizzazione di Produttori della Pesca Oceànica Italiana), and inter-trade organisations such as the Organizzazione Interprofessionale della Filiere Pesca e Acquacoltura in Italia (O.I. Filiera Ittica). In Veneto there are five producer organisations (14% of the total). Puglia has four producer organisations (11% of the total), while Sicily has three, representing 8% of the total. In Abruzzo and Friuli-Venezia Giulia there are two producer organisations, and in both Campania and Molise there is only one.

In the fisheries sector, the three most representative associations are the Lega Pesca, Federcoopesca and the Associazione Generale Cooperative Italiane. Altogether they represent 1 251 cooperatives and 39 415 fishermen. The three associations are represented on the
Fisheries Committee of the Directorate-General for Fisheries and Aquaculture and in local authorities. An important association in terms of aquaculture is the Associazione Piscicoltori Italiani (API).

ANCIT (Associazione Nazionale Conservieri Ittici e delle Tonnare) is an association combing 26 companies manufacturing canned fish. They represent 95% of production and sales of canned fish. In addition, in the AIIPA (Associazione Italiana Industrie Prodotti Alimentari) there is a group of 7 companies that import, process and sell frozen fish products, which represent around 80% of sales of this type of product.