



**ADRIAMED**  
**SCIENTIFIC COOPERATION TO SUPPORT**  
**RESPONSIBLE FISHERIES IN THE**  
**ADRIATIC SEA**  
GCP/RER/010/ITA  
GCP/RER/021/EC

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**AdriaMed Databases - A brief guide**

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## **Preface**

The Regional Project “Scientific Cooperation to Support Responsible Fisheries in the Adriatic Sea” (AdriaMed) is executed by the Food and Agriculture Organization of the United Nations (FAO) and funded by the Italian Ministry of Agriculture, Food and Forestry Policies (MiPAAF).

AdriaMed was conceived to contribute to the promotion of cooperative fishery management between the participating countries (Republics of Albania, Croatia, Italy, Montenegro and Slovenia), in line with the Code of Conduct for Responsible Fisheries adopted by the UN-FAO.

Particular attention is given to encouraging and sustaining a smooth process of international collaboration between the Adriatic Sea coastal countries in fishery management, planning and implementation. Consideration is also given to strengthening technical coordination between the national fishery research institutes and administrations, the fishery organizations and the other relevant stakeholders of the Adriatic countries.

## **A guide to AdriaMed databases**

During the sixth year of activity, the AdriaMed Project produced nine databases, available online through the AdriaMed web portal ([www.faoadriamed.org](http://www.faoadriamed.org)), and focusing on specific relevant areas of interest for the Project or the countries around the Adriatic Sea.

These databases were finalised to improve the availability of information related to the Adriatic Sea fisheries and its accessibility; open access is provided to the information, facilitating the dissemination of scientific materials published in and on the area.

The end users of these archives are the researchers, scientists and decision makers who can access a unique system of information at regional level.

This simple guide illustrates the main characteristics of each database available on the AdriaMed portal, as well as on CD Rom.

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\* This paper should be cited as follows: Milone, N., Zeuli, V. 2007. AdriaMed Databases - A brief guide. Paper presented at the AdriaMed Coordination Committee, Tirana 12-13 December 2006. GCP/RER/010/ITA/OP-28. *AdriaMed Occasional Papers*, 28: 12 pp

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Country Fishery Information





## Country Fishery Information

This section includes basic information on geography, fisheries and aquaculture, for each AdriaMed participating country. An informative note can be download in pdf format.

ALBANIA

CROATIA

ITALY

SERBIA-MONTENEGRO

SLOVENIA

ALL

GENERAL STATISTICS

pdf format

Area (kmq)

28748

geographic coordinates

41 00N, 20 00E

coastline (km)

362

RELATED INFORMATION

general economic data

fishery data

ports

links

institutions

maps

GENERAL ECONOMIC DATA

population (millions 2002 est.)\*

3.1

annual population growth rate (1975-2002)\*

1%

gross domestic product (GDP per capita annual growth rate) (1990-2002)\*

7.3%

education index, 2004\*

0.89

human development index (HDI) value, 2002\*

0.781

urban population (as % of total) 2002\*

43.2

infant mortality rate (per 1.000 live births) 2002\*

26

internet users (per 1.000 people) 2002\*\*

3.9

personal computers (per 1.000 people) 2002 est.\*\*

11.69

agriculture, value added (% of GDP) 2002 est.\*\*

25.44

industry, value added (% of GDP) 2002 est.\*\*

19.05

services, etc., value added (% of GDP) 2002 est.\*\*

55.51



## Adriatic Shared Demersal Stocks

This databank contains scientific information on the main fishery commercial species whose stocks are considered shared in the Adriatic Sea. The information has been collected in the framework of the Project activities and refers only to the Adriatic Sea.

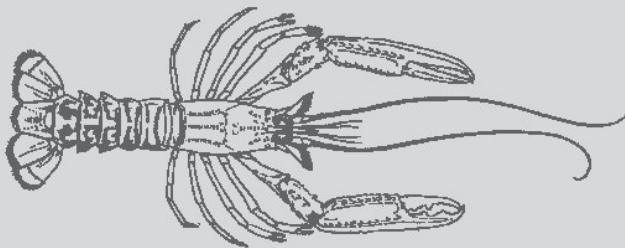
For each species an information sheet is available containing information on bio-ecology, population dynamics parameters and fisheries related information. Bio-ecology, life-history parameters, fishery exploitation and fishing gear selectivity information are those reported in the AdriaMed Technical Document N. 12 (Review of current knowledge on shared demersal stocks of the Adriatic Sea, March 2004).

The legislative information is taken from the AdriaMed Technical Document N.14 rev.1 (General outline of marine capture fisheries legislation and regulations in the Adriatic Sea Countries, June 2005).

The genetic information is that collected and obtained by the AdriaMed research programme on genetics (Identification of Population Units in Adriatic Sea Shared Stocks by Genetic Structure Analysis, April 2005).

The Fisheries Statistic figures are those reported in the FAO FISHSTAT Plus vers.2.3 database (GFCM capture production set 1970-2003).

Additional Information on Essential Fish Habitat has been included into summary table for European hake (*Merluccius merluccius*) life history (Mediterranean Sea and North East Atlantic Ocean). Associations and interactions with environmental and habitat variables are reported as well.

Nephrops norvegicus (Linnaeus, 1758)			
SPECIES DESCRIPTION	DISTRIBUTION	BIOLOGICAL DATA	EVALUATION AND EXPLOITATION
FISHERIES MANAGEMENT	GENETICS	LEGISLATION	REFERENCES
<b>Class:</b> Decapoda <b>Order:</b> Malacostraca <b>Family:</b> Homaridae <b>English name:</b> Norway lobster			
<b>Local Name:</b> SQ: Nefrops HR: Škamp IT: Scampo SR: Škamp SL: Škamp			

### SPECIES DESCRIPTION

Norway lobster is a medium to large sized crustacean decapod with well-calcified teguments, very pronounced rostrum, carapace and chelae, reduced pedunculated eyes and non-imbricated abdominal pleurae (Relini *et al.*, 1999).

The body is long and more or less flat laterally. There are three to four bones on the dorsal side and one to two on the ventral side of cephalothorax. The abdomen is long and ends with a fan-shaped telson that enables the lobster to swim. However, when moving, *Nephrops norvegicus* walks more than it swims (Fisher *et al.*, 1987; Relini *et al.*, 1999).

The first pair of cephalic appendices has composite eyes, each with a mobile peduncle. The first pair of antennae is short and forked. Each of the second pair is long and simple. The telson is long, with two pronounced bones at its apex. The first pair of legs is well developed with strong chelae. The second and third are thinner and have chelae as well (Relini *et al.*, 1999).

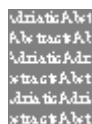
Norway lobster is orange coloured, with orange-red bands on chelae and on the anterior part of the cephalothorax.

### DISTRIBUTION

**World:**  
The species is distributed in the eastern Atlantic, from Morocco to Norway and Iceland, and in the Mediterranean (Fisher *et al.*, 1987 and Relini *et al.*, 1999).

**Adriatic Sea:**  
The species was recorded at depths from about 30 meters in the northern Adriatic Sea to 400 meters in the southern part of the Sea (Karlovac, 1953; Frogia and Gramitto, 1988; Vrqoć, 1995; Marano *et al.*, 1998a). In the northern part of the open Adriatic it can be found off Ancona. The most dense population is in the Pomo/Jabuka Pit region. There are rich fishing grounds in the Velebit Channel, Kvarner and Kvarnerić region along the Croatian coast (Karlovac, 1953; Crnković, 1964; Crnković, 1965). In the southern Adriatic, along the western (Italian) and eastern (Albanian) coasts, the settlements are not so dense (Karlovac, 1953; Marano *et al.*, 1998a).

Because the range of this species in the Adriatic is a continuous one, particular Norway lobster settlements cannot be regarded as isolated (Karlovac, 1953). Nevertheless, some differences do exist, primarily in length frequencies among the settlements around Ancona and the Pomo/Jabuka Pit (Frogia and Gramitto, 1981; Frogia and Gramitto, 1988; IMBC *et al.*, 1994), as well as among the settlements in the northern Adriatic channels and the Pomo/Jabuka Pit (Karlovac, 1953; Crnković, 1964; Crnković, 1965; Crnković, 1970; Jukić, 1974; Županović and Jardaš, 1989). Frogia and Gramitto (1981) discussed these differences as the consequence of the



# Adriatic Abstract

This database replicates over 4500 records included in the ASFA Database related to the Adriatic Sea.

It has been created with the kind authorization of the Publishing ASFA Partner, the Cambridge Scientific Abstracts (CSA), and the FAO ASFA Secretariat. All the records reported in the ASFA database and therefore in this replica, are produced through the cooperative efforts of the ASFA Partners. Since 2000, AdriaMed has been a participating International ASFA Partner thus contributing to the realization of the ASFA database.

A full text search, as well search by keywords, title and author is available. An information sheet with all the bibliographic characteristics of the records is given, together the abstract.

AdriaMed ASFA database: complete sheet	
Print by clicking here  or save the results as html or txt format: <input type="button" value="Save As..."/>	
<input type="button" value="New search"/> <input type="button" value="Back to results"/> <input type="button" value="Refine search"/>	
TI: Title:	Anchovy fisheries in the Adriatic Sea
OT: Original Title:	n. a.
AU: Authors:	Cingolani, N; Giannetti, G; Arneri, E
AF: Affiliation:	Istituto di Ricerche sulla Pesca Marittima (IRPEM - CNR), Largo Fiera della Pesca, 60125 Ancona, Italy
SO: Source:	Scientia Marina (Barcelona). Dec 1996.
IS: ISSN:	0214-8358
EI: Electronic ISSN:	
DE: Descriptors:	clupeoid fisheries; fishing vessels; stock assessment; biomass; fishery statistics; Engraulis encrasicolus; MED, Adriatic Sea
AB: Abstract:	Anchovy ( <i>Engraulis encrasicolus</i> , L.) is one the most important commercial species of the Adriatic Sea. With a surface area of 138,000 km <sup>2</sup> , about one twentieth of the Mediterranean Sea, the Adriatic Sea produced about 13,000 tonnes of anchovy in 1991, equal to 19% of the Mediterranean anchovy catches. The value of Adriatic anchovy catches has been estimated at about 15.6 MECU in 1991. Adriatic anchovy catches were very high in the late seventies (53,000 tonnes, average 1978-1980), then they decreased in the following years, until they collapsed in 1987. During this year, with a fishing effort similar to previous years, catches were only 3,700 tonnes. In successive years, stock recovered partially and anchovy catches increased to 10,000-15,000 tonnes. Anchovy is caught by Italian fishermen using two kind of fishing gears: midwater pair trawls (Italian name is volante) and purse seines (Italian name is lampara). The same fishing gears also catch sardines ( <i>Sardina pilchardus</i> , Walb.). The volante is mainly used in the northern and central Adriatic. At present about 70 couples of fishing vessels use this gear, their average engine power is 400 HP, average size of the vessels is 50 GRT. The lampara vessels operating in the Adriatic Sea number about 40 and they are concentrated, mainly, in the southern part of the Adriatic Sea. The lampara vessels, generally, have a bigger size than volante vessels (average of GRT is 85), but they have lower engine power (average of HP is 300). Since 1975, IRPEM has carried out a research programme on stock assessment of <i>Engraulis encrasicolus</i> (L.) and <i>Sardina pilchardus</i> (Walb.) in the Adriatic Sea, using population dynamic models. IRPEM collects catches by species (anchovy and sardine), effort data, fishing fleet characteristics and length frequency data. Stock assessments and biomass estimations of anchovy have been carried out in the last twenty years using direct methods as echosurveys and ichthyoplankton surveys as well as indirect (catch and effort and VPA) methods. Anchovies biomass is estimated around 50,000 tonnes in the years 1990-1992. In recent years anchovy catches are about the 30% of estimated biomass. The exploitable stock size each year seems determined in the main by the size of the recruitment in the two immediately preceding years rather than by the prevailing levels of fishing effort.
CA: Corporate Authors:	n. a.
CF: Conference:	





# Adriatic Fisheries Legislation

This databank is based on the AdriaMed Technical Document N°14 “General outline of marine capture fisheries legislation and regulations in the Adriatic Sea Countries”. The document represents the effort of the FAO AdriaMed Project to provide background information on legislative topics of importance to marine capture fisheries in the countries bordering the Adriatic Sea (Albania, Croatia, Italy, Serbia-Montenegro and Slovenia). The databank is organized in the following sections:

- a. Access regimes to fisheries resources;
- b. Definitions of terms;
- c. Management and conservation measures;
- d. Monitoring, control and surveillance and measures.

For each topic the legislative background in each country is given as well as links to the related legislative texts. The databank is updated at September 2004, with the support and supervision of each country participating in AdriaMed. It aims to provide useful indications in order to improve understanding of fisheries legislation in marine fisheries management in the Adriatic Sea.

General outline of marine capture fisheries legislation and regulations in the Adriatic Sea countries				
ALBANIA	CROATIA	ITALY	SERBIA-MONTENEGRO	SLOVENIA
<p>This review is based on the <a href="#">AdriaMed Technical Document N°14</a> “General outline of marine capture fisheries legislation and regulations in the Adriatic Sea Countries”. The document represents the effort of the FAO AdriaMed Project to provide background information on legislative topics of importance to marine capture fisheries in the countries bordering the Adriatic Sea (Albania, Croatia, Italy, Serbia-Montenegro and Slovenia).</p> <p>This review was fully updated in September 2004, with the support and supervision of each country participating in AdriaMed.</p> <p>The material in this review cannot be, and does not aim to be, exhaustive either in terms of the topics covered or the legislation screened. It aims to provide useful indications in order to improve understanding of fisheries legislation in marine fisheries management in the Adriatic Sea.</p> <p>The following topics are therefore considered:</p> <p>a. Access regimes to fisheries resources; b. Definitions of terms; c. Management and conservation measures and d. Monitoring, control and surveillance and measures.</p>				
<b>ALBANIA</b>				
I. Access regimes to fisheries resources		III. Conservation and management measures		
> Commercial fishing licences		> Planning instruments		
> Scientific research authorisation		> Commercial fishing		
> Sport fishing licences		> Sport fishing		
II. Definition of terms		IV. Monitoring, control and surveillance		
<b>CROATIA</b>				
I. Access regimes to fisheries resources		III. Conservation and management measures		
> Commercial fishing licences		> Commercial fishing		
> Small scale fishing license		> Small-scale fishing		
> Sport or recreational fishing licences		> Recreational and sport fishing		
> Scientific research licences		IV. Monitoring, control and surveillance		
II. Definition of terms				
<b>ITALY</b>				
I. Access regimes to fisheries resources		III. Conservation and management measures		
> Professional fishing fleet and licenses system		> Planning instruments		
> Sport and recreational fishing permits		> Commercial fishing		
> Scientific research permits		> Sport or recreational fishing and underwater fishing		
I.a <i>Italy as European Union Member State</i>		> Protected species		
> EU Council Regulations relevant for Adriatic member states		> Fishing zones		
> Commercial fishing licences		> Protected areas		
> Sport or recreational fishing and scientific research permits		IV. Monitoring, control and surveillance		
II. Definition of terms		IV.a <i>Italy as European Union Member State</i>		
II.a <i>Italy as European Union Member State</i>				
<b>SERBIA-MONTENEGRO</b>				
I. Access regimes to fisheries resources		III. Conservation and management measures		
> Commercial fishing licences and small-scale fishing licences		> Commercial fishing		
> Sport and recreational fishing licences		> Recreational and sport fishing		
> Scientific research licences		IV. Monitoring, control and surveillance		
II. Definition of terms				
<b>SLOVENIA</b>				
I. Access regimes to fisheries resources		II. Definition of terms		
> Commercial fishing permits		II.a <i>Slovenia as European Union Member State</i>		
> Sport and recreational fishing permits		III. Conservation and management measures		
> Scientific research permits		> Planning instruments		
I.a <i>Slovenia as European Union Member State</i>		> Commercial fishing		
> EU Council Regulations relevant for Adriatic member states		> Recreational and sport fishing		
		IV. Monitoring, control and surveillance		
		IV.a <i>Slovenia as European Union Member State</i>		



## AdriaMed Publications

This database includes all the publications issued by the Project. An information sheet with keywords and abstract is available for each document, as well the full text in pdf format. Occasionally, relevant documents or abstracts are available in the national languages of some participating countries.

**ADRIAMED PUBLICATIONS**

**SEARCH BY:**

**keywords:**  
abiotic factor

**authors:**  
AdriaMed

**serial/issue:**  
A. Technical Documents TD-17

[▶ Latest Publication](#)

[▶ Complete List](#)

[▶ Code of Conduct](#)

AdriaMed Documents: complete sheet					<a href="#">BACK</a>
Zip of PDF:	<a href="#">↗ click here to download the document</a>				
Abstract languages:	shqip	hrvatski	english	italiano	slovenko
Title:	Adriatic Sea Professional Fishery Associations - First AdriaMed Meeting.				
Authors:	AdriaMed				
Place:	(Split, Croatia 17th-18th July 2001)				
Series:	GCP/RER/010/ITA/TD-06				
Pages:	34				
Publication year:	2001				
Size:	-439 Kb-				
Keywords:	cooperatives - fishery management - fishery organizations - fishery policy - fishery resources - international cooperation - regional planning - shared stocks				





## Adriatic Links

The aim of Adriatic Links is to make the existence of interesting web pages known. The links are those related to the Project areas of interest and fisheries information associated directly or indirectly to the Adriatic Sea.

Adriatic Links: Results by Country		NEW SEARCH	BACK
		- <a href="#">legenda</a> main content	
		- Max number of records for page: 3	
Name:	Government of the Republic of Albania		
Category:	Administrative Bodies		
Place:	Albania		
Language:	EN SQ		
Description:			
Website:	<a href="#">www</a>		
Main content:	 		
Name:	Fishery Directorate - Ministry of Agriculture and Food		
Category:	Administrative Bodies		
Place:	Albania		
Language:	EN AL		
Description:			
Website:	<a href="#">www</a>		
Main content:			
Name:	Durrës Port Authority		
Category:	Fishing Industries		
Place:	Albania		
Language:	EN		
Description:			
Website:	<a href="#">www</a>		
Main content:			



## Adriatic Fishery Ports and Fishery Markets

This database contains information on fishing ports and related fish markets in the Adriatic Sea. The databank can be searched for country, administrative region or city. Information on structural and functional aspects for each port and related fish market is available.

Adriatic Fishery Ports		NEW SEARCH	BACK
- Max number of records for page: 15. - Click on the name of the port to view the complete sheet of the record.			
NAME:	REF. AREA:	COUNTRY:	
Ancona	Marche	Italy	
Civitanova Marche	Marche	Italy	
Cupra Marittima	Marche	Italy	
Fano	Marche	Italy	
Gabicce	Marche	Italy	
Grottammare	Marche	Italy	
Marotta	Marche	Italy	
Numana	Marche	Italy	
Pedaso	Marche	Italy	
Pesaro	Marche	Italy	
Porto Recanati	Marche	Italy	
Porto San Giorgio	Marche	Italy	
Potenza Picena	Marche	Italy	
San Benedetto del Tronto	Marche	Italy	
Senigallia	Marche	Italy	
<input type="button" value="K"/> <input type="button" value="L"/> <input type="button" value="R"/> <input type="button" value="M"/> [3/6]			
SEARCH PORTS BY:			
Country:	Ref. Area:		
-----choose----- <input type="button" value="OK"/>	-----choose----- <input type="button" value="OK"/>		



Adriatic Fishery Ports: complete form		NEW SEARCH	BACK
Port:	Ref. Area:	Country:	
San Benedetto del Tronto	Marche	Italy	
Coordinates: Lat: 42° 57',00N Long: 13° 52',60E			
nr quays:	2	water supplying:	Yes
electric supplying:	Yes	ice plants:	No
cold storage:	1	slipways:	1
dry dock:	No	machine shop:	8
piers:	2	lifting apparatus:	4
fishery supply:	5	capacity:	
area(mq):		fuel station:	Yes
depth(m):		port in operation:	
shipyard:			
		fish market	further information
SEARCH PORTS BY:			
Country:	Ref. Area:		
-----choose----- <input type="button" value="OK"/>	-----choose----- <input type="button" value="OK"/>		

Adriatic Fishery Markets		NEW SEARCH	BACK
Fish market:	Ref. Area:	Country:	
San Benedetto del Tronto	Marche	Italy	
market type:	Production.		
management:	San Benedetto del Tronto Council		
year of construction / restructured:	1936/1997		
area (sqm):	1534 sqm covered and 8105 sqm open.		
dealing system:	Digital auction.		
essential services:	Display areas, packaging systems, restaurant, 1 bank, portorage, 13 boxes.		
hygiene and sanitation:	Yes: held since 1996 for the auction room		
characteristics of marketed produce:			
url:		Port form:	
		<input type="button" value="PORT"/>	
SEARCH FISHERY MARKETS BY:			
Ref. Area:			
-----all----- <input type="button" value="OK"/>			



## Adriatic Institutions

This database contains information on the relevant institutions in the Adriatic Sea Region. Information on laboratories, location, specialization, equipment, areas of research, is given.

Adriatic Institutions: complete sheet		NEW SEARCH	BACK
Institution:	Fishery Research Institute		
Acronym:			
Address:	Lagja Teuta Rruga Skenderbej     Durres - Albania		
Tel:	052: 22552		
Fax:	052: 22552		
Email:			
Url:			



## Adriatic Libraries

The database contains the list of the Adriatic Institutions which hold scientific serials published in the Adriatic Sea Region. General information on each library and the list of the publication held is provided.

Virtual library: results		NEW SEARCH	BACK
		Library sheet	
Agronomski fakultet - Zagreb (HR)			
Fakultet kemijskog inženjerstva i tehnologije - Zagreb - Zagreb (HR)			
Farmaceutsko biokemijski fakultet - Zagreb - Zagreb (HR)			
Hrvatski prirodoslovni muzej - Zagreb (HR)			
INA - INDOK - Zagreb (HR)			
Institut Rudjer Boškovic - Zagreb (HR)			
Institut za fiziku Sveučilišta u Zagrebu - Zagreb (HR)			
Institut za geološka istraživanja - Zagreb (HR)			
Institut za oceanografiju i ribarstvo - Split (HR)			
PMF - Centralna kemijska biblioteka - Zagreb (HR)			
PMF - Središnja biološka knjižnica - Zagreb (HR)			
PMF - Središnja geofizicka knjižnica - Zagreb (HR)			
PMF - Središnja knjižnica za fiziku - Zagreb (HR)			
Prehrambeno biotehnoški fakultet - Zagreb (HR)			
Prehrambeno tehnološki fakultet, Osijek - Zagreb (HR)			
Country selected: Croatia			
REFINE YOUR SEARCH BY EACH SERIAL HELD:		Acrocephalus	

Virtual library: results		NEW SEARCH	BACK
library:	Agronomski fakultet		
city:	Zagreb (HR)		
country:	Croatia		
tel/fax:	+385 1 2393767 / 215300		
email:			
website:			
serials held:			

Virtual library: results		NEW SEARCH	BACK
library:	Agronomski fakultet		
website:			
serial:	Ribarstvo		
serial:	Periodicum biologorum		
serial:	Natura croatica		

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URL: <http://www.faoadriamed.org>