



COMPREHENSIVE SOCIOECONOMIC DATA COLLECTION FOR THE IONIAN SEA AND ROMANIAN COASTS FISHERIES

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In this study the results of two surveys conducted in the Ionian Sea (Greece) and the Romanian coast of the Black Sea related to the socio-economic dimensions of fishery in both regions are presented. The data were collected through interviews from the local fishermen of coastal and middle fishery, using almost the same questions.

INVESTIGATION AND APPLICATION STUDY OF THE ECOSYSTEMIC APPROACH TO FISHERY IN THE IONIAN SEA (GREECE) AND BLACK SEA (ROMANIA)

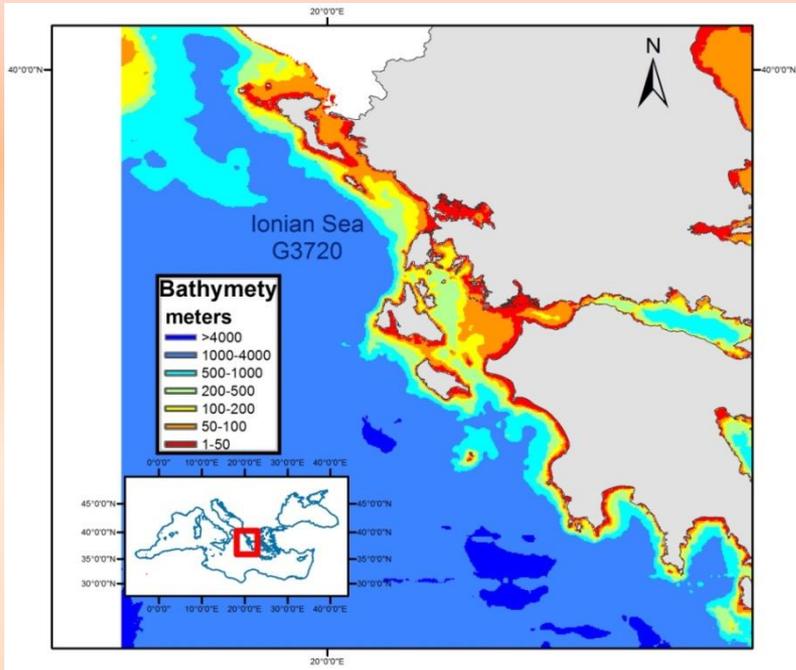
QUESTIONNAIRES DATA:

Face-to-face interviews of fishermen from various ports (small and big)

Structured questionnaire aiming to collect:

- Technical data (vessel, port/harbour, gears)
- Ownership data
- Household data
- Income data
- Species and amounts
- Income
- Fishing costs, fishery grounds
- Problems and opinions of fishermen – relationship between problems – origin of problems (attempt to build mental models if possible)

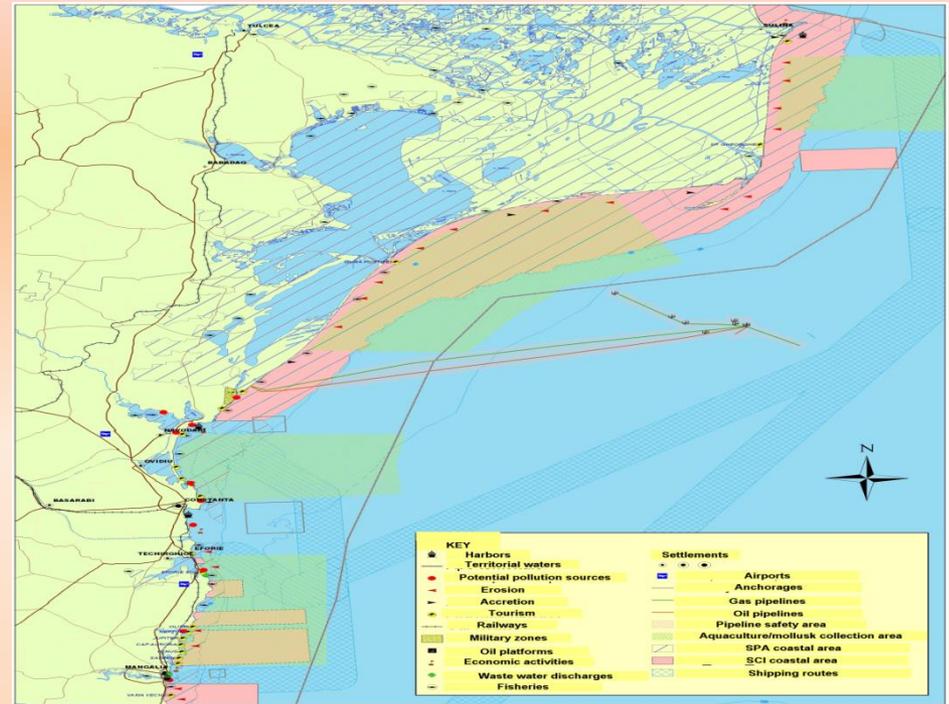
IONIAN SEA



The Ionian Sea, surrounded by Italy, Hellas and Tunisia, is the largest in volume ($10.8 \times 10^5 \text{ km}^3$) and the deepest sea of the Mediterranean basin (max depth: 5121 m, total length: 2300 km).

It communicates with the Mediterranean through the strait of Sicily, with the Adriatic through the Otranto strait and with the Aegean Sea through the three straits of the Western Cretan Arc (Elafonisos, Kithira, Antikithira straits).

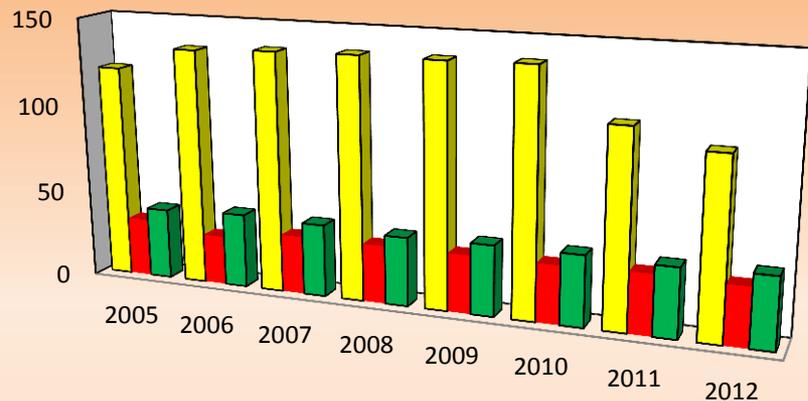
ROMANIAN COASTS OF BLACK SEA



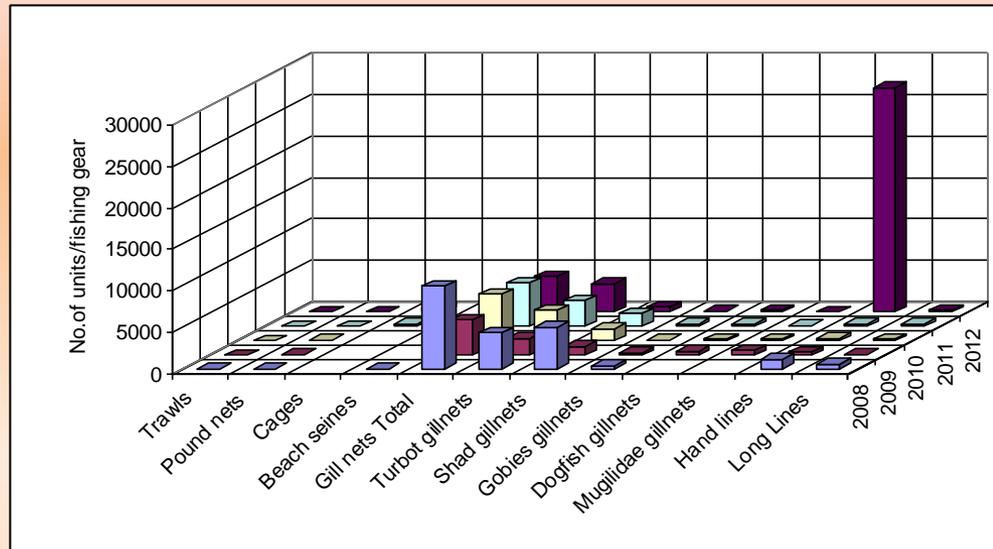
The Romanian coast, bordering the Black Sea, is 244 km long (6% of the Black Sea shore). It runs from the border with Ukraine in the North to the boundary with Bulgaria in the South and it is a part of a historic region named Dobrogea

FISHERY FLEET

Number of fishing boats/gear

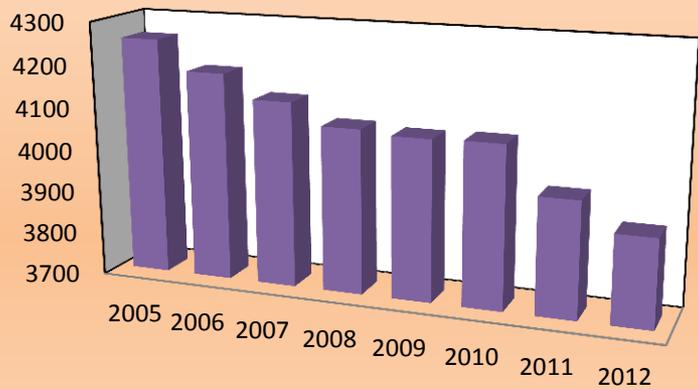


■ Beach seine ■ Trawler ■ Purse seine

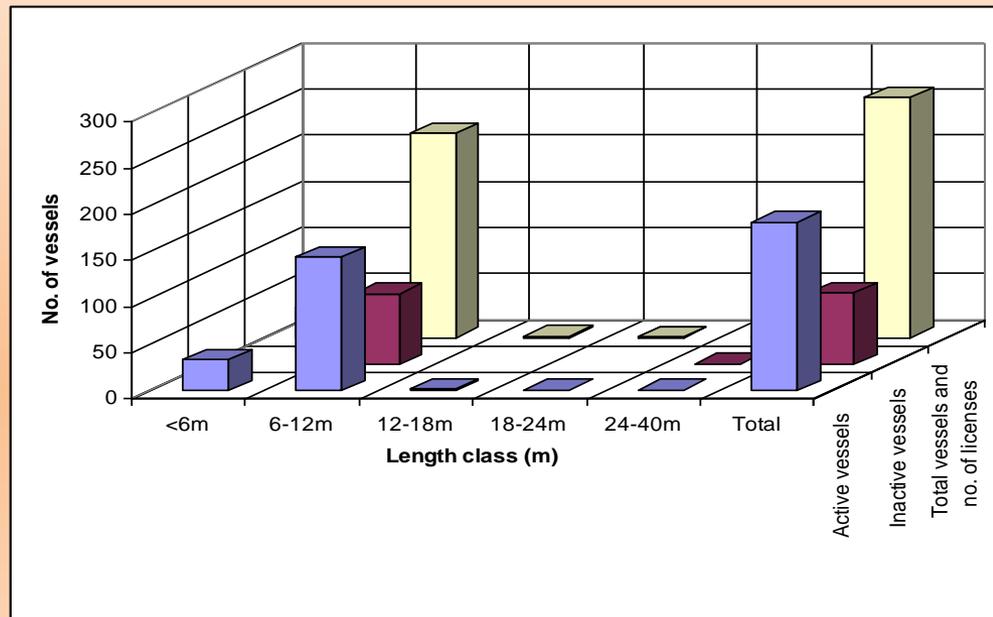


ROMANIAN COASTS OF BLACK SEA

IONIAN SEA



■ Other coastal



FLEET IN THE IONIAN SEA

Vessel	Horsepower, HP	Engine power, kw	Capacity, gt	Engine number
Trawlers	362,67	106	98,50	1 or 2
Beach seines	85		5,5	1
Purse seines	229,98	164,44	24,16	1
Coastal	9,67	48,15	4,29	1 or 2

Vessel	Length, m	Width, m	Age, years
Trawlers	25,27	6,63	21
Beach seines	10	3,4	59
Purse seines	18,08	5,59	29,76
Coastal	8,59	3,31	21,38

EQUIPMENT

VHF 86,1%, UHF 19,4%, SSB 8,3%, Radar 47,2%, Fish Finder 63,9%, Bow thrusters 11,1%, GPS 66,7%, Plotter 77,8%, Auto pilot 16,7%, Scanmar/simrad 2,8%, Freezers 8,3%, Ice maker machines 2,8%, Fresh water tanks 58,3%, Bathometer 100%, Power generator 16,7%, Hydraulic winch 94,4%

FLEET IN THE ROMANIAN COASTS

- ◆ The small scale/artisanal fishery in the Romanian coasts is mainly carrying out by **coastal trawlers, pelagic trawls, turbot gillnets**, activating at depths greater than 20 m, **fixed gears** (pound nets, gillnets, long lines, and beach seiners) and up to 40 – 60m depth, with **gillnets long lines** mainly for turbot and dogfish. The use of the **bottom trawlers** in commercial fishery is prohibited.
- ◆ Romanian fleet operates up to 30–35 marine miles out in the Black Sea.
- ◆ The main fishery activity in the coastal zone is carrying out in the first three/four months of the season (April-July) due to the turbot's migrations for feeding.
- ◆ In 2012, the total number of boats/vessels registered, mainly gillnets and long lines, was 261, from which only 183 have been active, most of them having LOA of 6-12m.

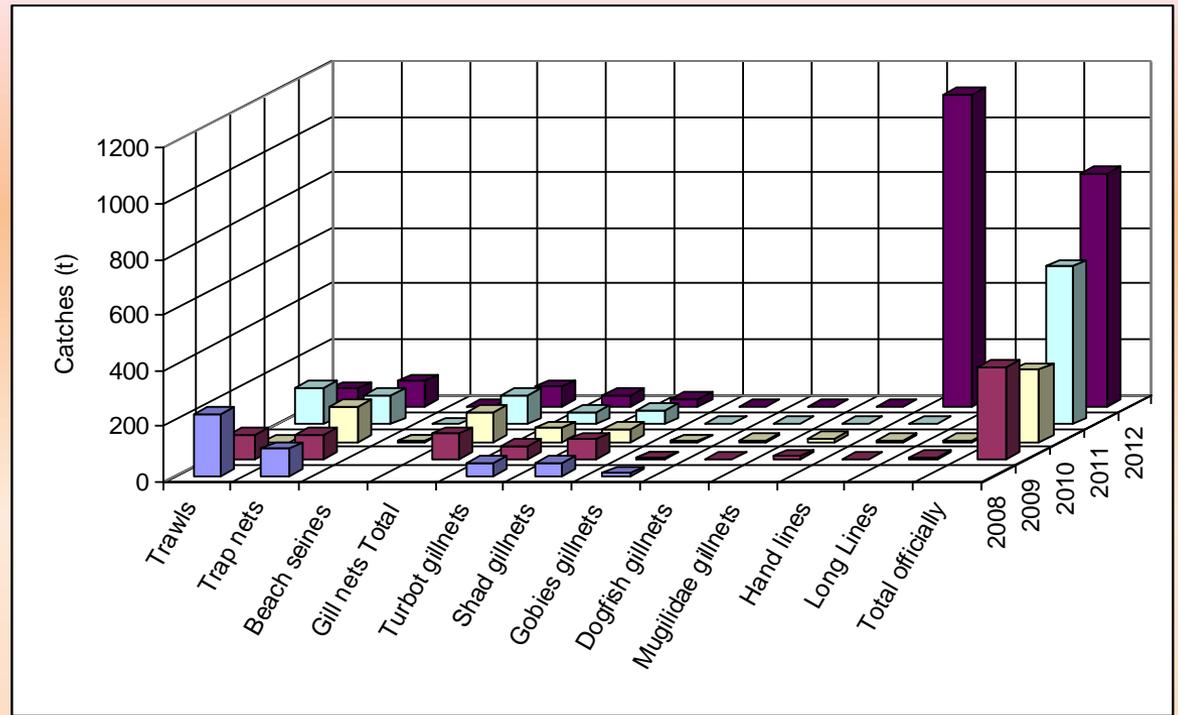


Equipment: The fleet is in poor conditions and needs improvements of safety on-board, working conditions and facilities for landing.

Material: Metal (LOA < 12 m) or wood, plastic.

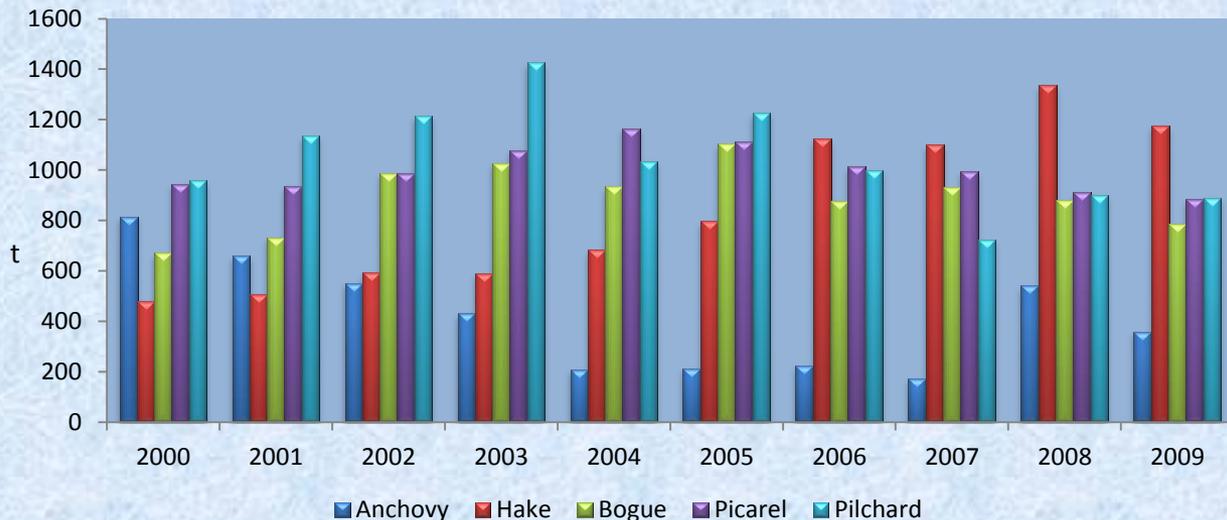
FISHERY PRODUCTION

The preferred species for the fishermen in the Ionian Sea are: anchovy, mullets, red pandora, hake, lobster, shrimps



IONIAN SEA

ROMANIAN COASTS OF BLACK SEA

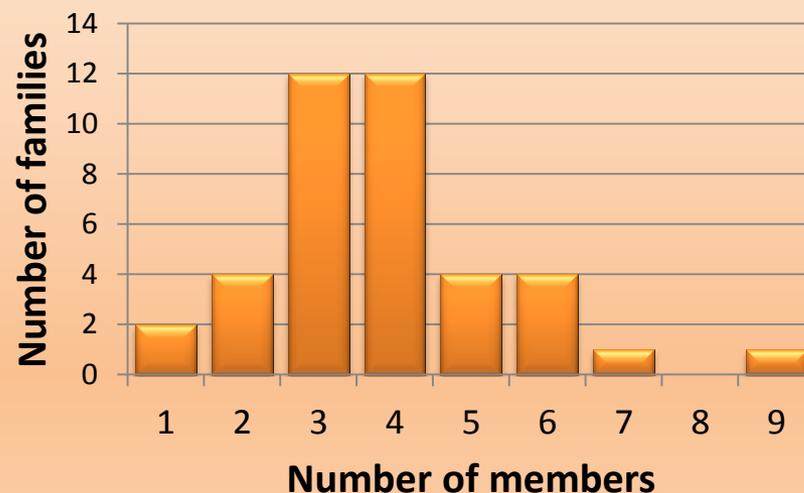
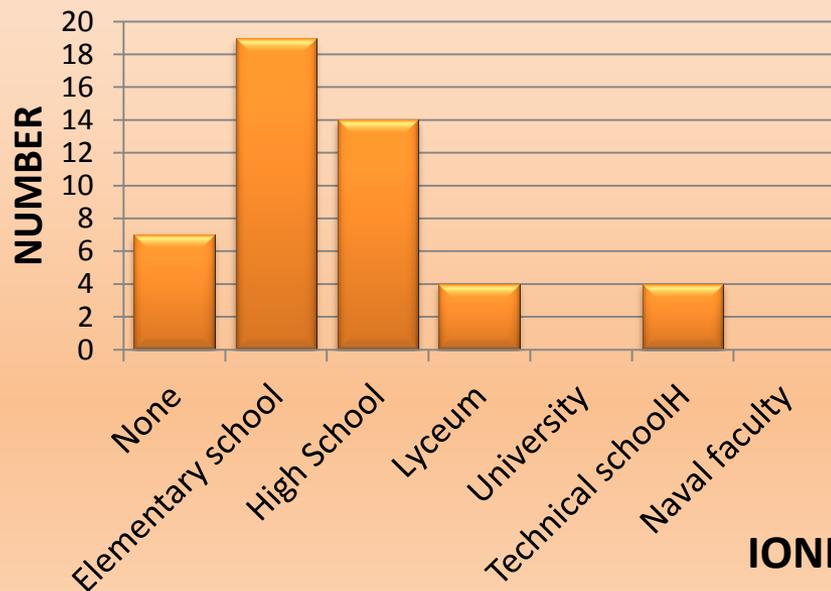


During 2000-2012, the level of total catch declining from 2476 to 835 t. The main species in the 2012 catches have been: rapana, sprat; turbot; anchovy; horse mackerel and gobies

Ownership data

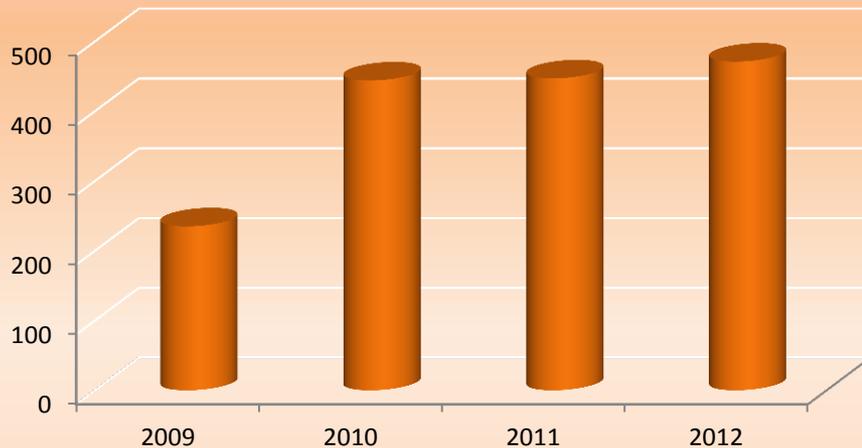
Most of the vessels in the **Ionian Sea** have one owner (75% of the interviewers)
Most of them (93%) have been graduated from the elementary or high school
Almost all of them (85%) are married and their household consists from 1-9 persons
Only the 40,26% of their family members is working and a 33,12% of them in the fishery sector

The total number of fishing enterprises in the **Romanian** fleet was 105 (2011).
The vast majority of fishing enterprises (83%), owned a single vessel and 19% of enterprises owned two to five fishing vessels.
Only 3 fishing enterprises owned six or more fishing vessels.



Crew data

Number of workers



- The number of fishermen for vessels having LOA>24 m and those in the small scale fishery (LOA<12 m) has been decreased in 2009-2012

- In 2012 a number of 371 fishermen acted for the small scale fisheries (boats 6-12m),

- The level of employment increased between 2009 and 2010, with the total number of workers increasing by 53% and remained stable till 2012

- The majority of the vessels in the **Ionian Sea** (69.44%) is employing fish workers (1-9 members).

- The trawlers and the purse seiners have the most increased number of staff (4-9 persons).

- 81.70% of the employees are full-time and part-time 18.30%.

- There are few cases where fishermen have staff not involved in fishing on board but on the port, on the preparation of departure and for sales (20% are full-time and 80% part-time).

- Regarding the nationality of the fish workers, they are Greeks (56.96%) and foreigners (43.04%) by main countries of origin Egypt (76.47%), Romania (17.65%) and Albania (5, 88%).

Time devoted to fishing

Ionian Sea

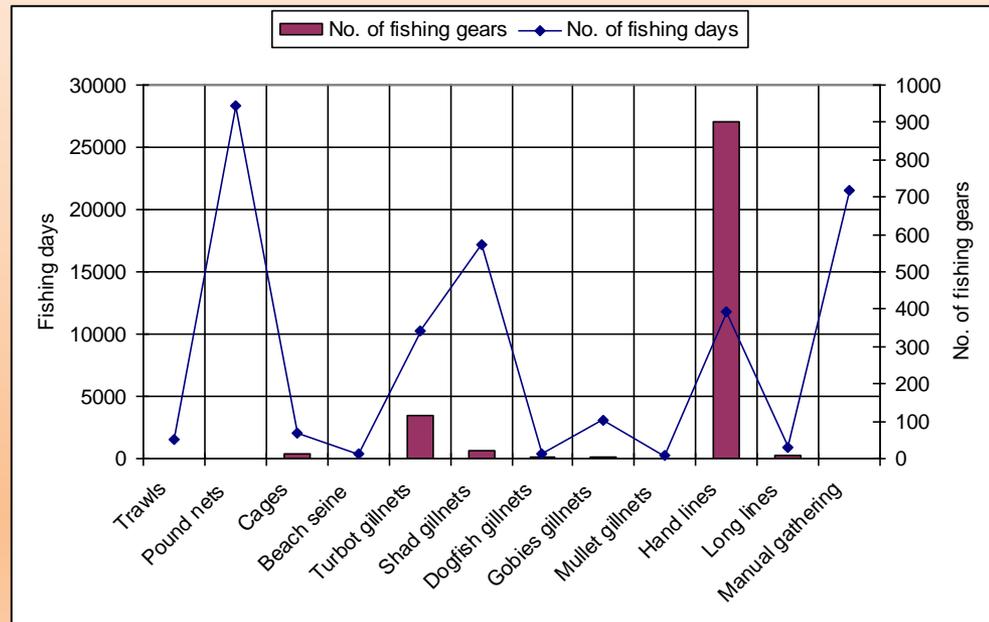
Hours/day to fishing trip: 0,5-6 h

Hours/day spent at fishing ground: 2720-4000 h/year (trawlers), 1353-1517 h/year (purse seiners), 1558-1954 h/year (coastal), 360-540 h/year (beach seiners)

Hours/day spent at dock: 1-7 h

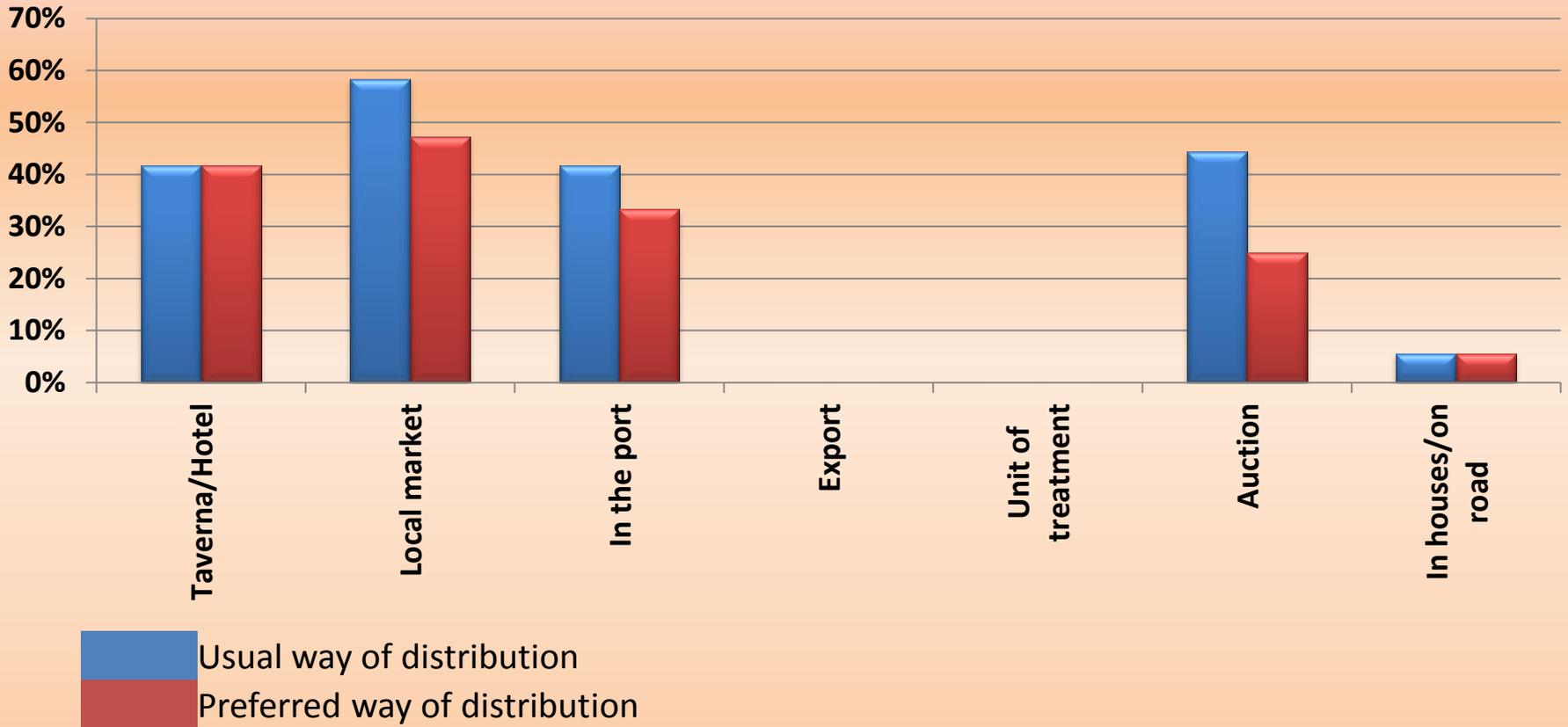
Days/year of not fishing: damages (22,82%), bad weather (22,15%), vessel and gear normal maintenance (16,78%), sickness (16,11%), legislation

In 2011 the **Romanian** fishing fleet spent a total of around 6.5 thousand days at sea, 57% of which were actual fishing days. The total number of days at sea increased by around 75% between 2008-2010, while total fishing days remained stable during the same period. The total quantity of fuel consumed in 2010 was 0.21 million litres, an increase of around 90% between 2008 and 2010



Fishing effort in 2012 at Romanian littoral

Distribution of fishery products in the Ionian Sea

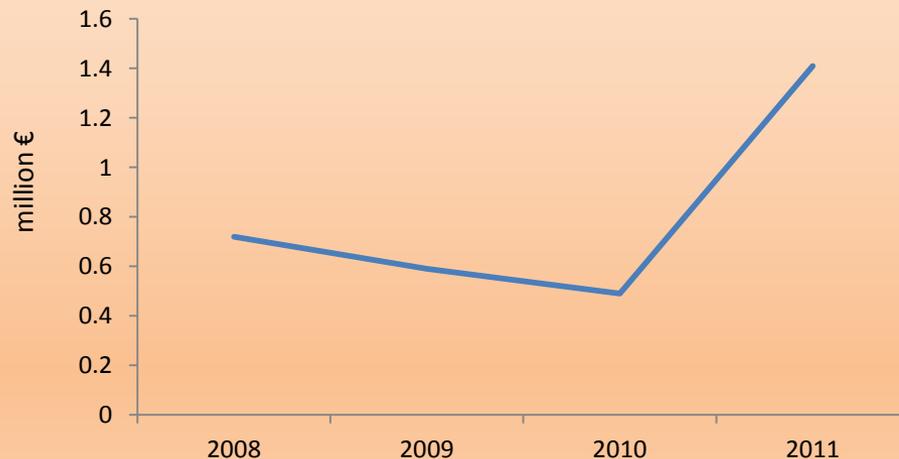


INCOME FROM FISHERY

Income breakdown in the **Ionian Sea**: 65-98% from fishes, 2-19% from shellfishes, 2-3% from sharks, 1,5-20% from others

Income from other activities for coastal fishermen: The 33,4% of the coastal fishermen gain its income from agriculture, tavernas, tourism, fish shops

Income from the Romanian fleet



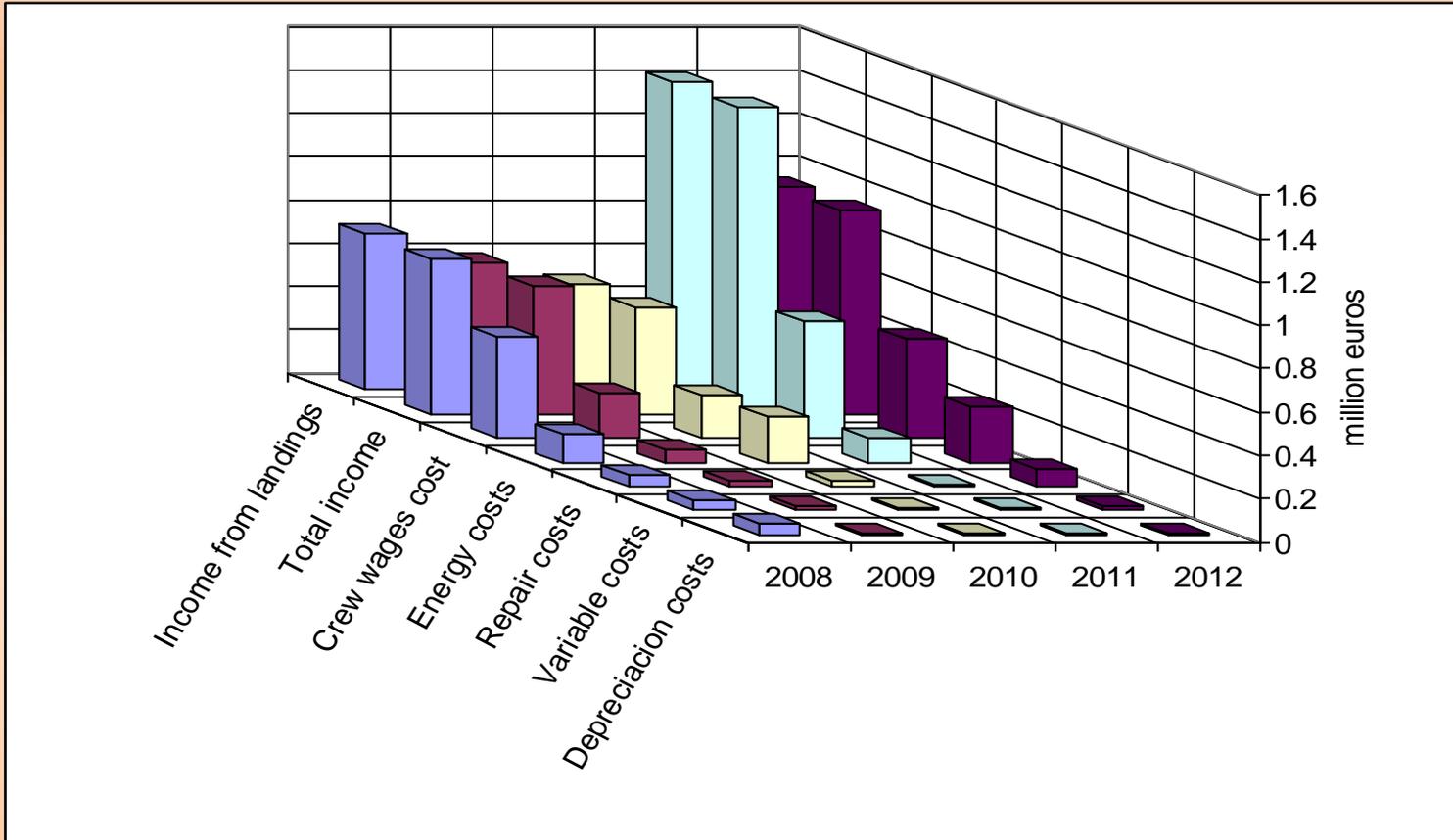
In 2011, *Rapana venosa* presented the highest value of landings (€ 0.89 million), followed by turbot (€0.21 million) and *Alosa immaculata* (€0.1 million). The prices obtained for these key species generally declined between 2008 and 2010.

In 2010, turbot (*Psetta maxima*) achieved the highest average price per kilo (€4.79 per kg). In 2011, rapana (€2.46 per kg), while in 2012 Pontic shad (€2.19 per kg).

FISHERY COSTS IN THE IONIAN SEA

Cost category	Gear			
	Trawler	Purse seines	Coastal	Beach seines
VESSEL MAINTENANCE	10.000 €	11.889 €	1.226 €	3.000 €
GEAR MAINTENANCE	3.667 €	18.000 €	2.258 €	1.500 €
GEARS DAMAGES	2.500 €	19.250 €	2.445 €	
FUEL	146.667 €	40.983 €	8.709 €	12.000 €
OIL/FILTERS	3.733 €	5.827 €	1.165 €	1.320 €
BAIT			2.385 €	30.800 €
INSURANCE OF VESSEL		4.500 €		
INSURANCE OF GEARS		1.000 €	1.150 €	
SALARIES /INSURANCE OF CREW	47.293 €	70.114 €	1.200 €	
FOOD				
VESSEL MORTGAGES	6.300 €		250 €	
ICE			1.000 €	
HARBOUR TOLLS	3.400 €	17.325 €	1.579 €	4.400 €
TAXES	519 €	292 €	57 €	
BOXES			394 €	
VAT	6.600 €	15.432 €	1.725 €	
OTHER COSTS		20.750 €		400 €

FISHERY COSTS IN THE ROMANIAN COSTS



Socioeconomics acknowledges that economic behavior is directly affected by the social context of a community. It is an interdisciplinary research area that incorporates both a quantitative and qualitative approach by taking into account cultural aspects. Ashford (2004) states that socioeconomics evaluates economics based on “the assumption that individual choices are shaped not only by notions of rationality [and self interest] but also by emotions, social bonds, beliefs, expectations, and a sense of morality”

Many similarities and differences exist in the socioeconomic sector of the fishery between both areas reflecting the different catches, fleet, fishery grounds, economic values.

The implementation of an integrated fisheries management system, in both areas, is needed for the sustainable management of stock assessment. This system should retain the fish populations, while ensuring the ecosystem integrity, ensuring the long-term economic viability of the fishing industry under the Common Fishery Policy (CFP).



Thank you.....

