

## WP5- Act.5.1

«Socio-economic effects of different management scenarios applied to Rapido trawl fishery targeting common sole in Marche Region»

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# Marche Region in figures (I)

- 174 km of coastline
- 8 ports and 12 landing points
- Third-largest region in Italy by gross tonnage of shipping
- A fishing fleet consisting of 778 vessels and 2000 employees
- A third of the national hydraulic dredges fleet for baby clam
- 37 fish processing industries
- The first Region in Italy to establish Allocated Zones for Aquaculture



\* Marche Region –Fisheries Economy Department

# Marche Region in figures (II)

## Technical features of the fishing fleets, MARCHE, 2018

Sistemi	Unità		Tonnellaggio		Potenza motore	
	num.	% num sul totale	GT	% GT sul totale	KW	% KW sul totale
Circuizione	1	0,22%	144	0,99%	441	0,54%
Draghe Idrauliche	221	18,02%	3.396	23,36%	23.616	29,13%
Piccola pesca	401	61,47%	763	5,25%	12.151	14,99%
Rapido	19	2,83%	1.799	12,37%	7.335	9,05%
Strascico	119	14,96%	6.588	45,31%	29.213	36,03%
Volante	17	2,50%	1.850	12,72%	8.319	10,26%
<b>Totale complessivo</b>	<b>778</b>	<b>100,00%</b>	<b>14.540</b>	<b>100,00%</b>	<b>81.075</b>	<b>100,00%</b>

## Catches, revenues and unit price of catches of the fishing fleets, MARCHE, 2018

Sistemi	Catture (ton.)	% catture sul totale	Ricavi (mln€)	% ricavi sul totale	Prezzi (€/kg)
Draghe Idrauliche	5.928	28,26%	14,70	17,16%	2,48
Piccola pesca	1.792	8,54%	10,89	12,72%	6,08
Rapido	1.379	6,57%	7,89	9,22%	5,72
Strascico	5.939	28,31%	43,52	50,82%	7,33
Volante	5.937	28,30%	8,63	10,08%	1,45
<b>Totale complessivo</b>	<b>20.976</b>	<b>100,00%</b>	<b>85,64</b>	<b>100,00%</b>	<b>4,08</b>

Source: IREPA

# Marche Region in figures (III)

## Effort in days of the fishing fleets, MARCHE, 2018

Sistema	Numero di giorni	
	Totale	Medi
Circuizione	148,00	158,00
Draghe Idrauliche	14.180,00	73,93
Piccola pesca	32.962,21	88,72
Rapido	2.485,00	143,32
Strascico	17.490,00	162,72
Volante	2.066,00	134,88
<b>Totale complessivo</b>	<b>69.331,21</b>	<b>89,11</b>

Source: IREPA

# The regional fisheries system: weaknesses

**PROGRESSIVE REDUCTION OF  
THE INCOMES**



- ✓ Increasing of operating costs (labour, fuel, administratives costs)
- ✓ Competition with seafood products from extra EU Countries
- ✓ Enforcement of national and European fisheries restrictions aimed at long term enviromental protection and sustainable exploitation of stocks (short term economic loss for fishers)

Environmental protection measures impact on production costs  
E.g. fishing ban has an immediate effect on the enterprises income

# Sustainability and development of fisheries sector: calling for a «shared» governance

**TOWARDS A COMMON  
GOVERNANCE IN ADRIATIC**



- ✓ Setting-up of Management Plans at local, national and Basin's level, targeted on species and priority areas for stocks
- ✓ Common management strategy towards the sustainable exploitation of the common sole stock in the long term

Stocks and fishing activities are managed at UE level through multi-annual management plans (MAP). MAPs are aimed at restoring overexploited stocks through specific restrictions for fisheries with the final goal of maintaining the resources at higher and stable levels of biomass for future generations to come.

In this way, the responsibility of fishers takes a central role in the management of the resources.

# The objectives of transnational projects: experiences in Marche Region and target species

**ECOSEA PROJECT**  
(IPA Adriatic  
2007/2014 Programme)



**DORY PROJECT**  
(INTERREG Italy – Croazia  
2014/2020 Programme)

Contributing to the protection and conservation of Adriatic ecosystems and promoting the sustainable use of marine resources by means of:

- ✓ Shared actions built upon scientific evidences
- ✓ Engagement and involvement of fisheries operators
- ✓ Scenarios' simulation to adopt management measures aimed at reducing the negative impact of some fishing activities on the most important stocks

# Decision support tools for an ecosystem based approach to fisheries

**DISPLACE:** an advanced bio-economic model for spatial planning with fisheries (Bastardie, DTU Aqua) able to simulate the biological, social and economic effects of alternative management measures, exploring different management scenarios for a sustainable exploitation of shared stocks, contributing to the implementation of an ecosystem based approach to fisheries and to the processes of Maritime Spatial Planning in Adriatic.

## Target Species: common sole and cuttlefish

- High commercial value
- Need of shared management measures to preserve the resource



# Target species: common sole

- In Northern Adriatic the common sole is targeted by rapido trawls and set nets (i.e., gillnet and trammel net)
- Rapido trawls are fished all year round, while set nets are used from spring to fall
- The Minimum Conservation Reference Size (MCRS) for common sole (20 cm TL) doesn't match with the size at first sexual maturity (25 cm TL)
- Nursery areas of this species are located along the coastal zone of Marche Region, this explains why catches are dominated by age 0 and age 1 sole

# Common sole: scenarios tested by DISPLACE

The effects of the following spatial management scenarios have been tested:

## 1. STATUS QUO

Baseline considering recent fisheries regulation rules in Italy, Croatia and Slovenia.

## 2. 6-NM TRAWLING BAN ALONG THE ITALIAN COASTS (GSA17)

This scenario excludes Croatia and Slovenia's waters due to existing strict fisheries regulations and complex geomorphological characteristics of eastern Adriatic coast, as well as the Italian Maritime Departments of Monfalcone and Trieste

**3. SOLE SANCTUARY** - a permanent closure of the "sole sanctuary" area for bottom otter and rapido/rampon trawlers (both Italian and Croatian fleets)

## 4. SELECTIVITY

Increase the selectivity of gillnet through the adoption of a 72mm stretched mesh size and increase of the common sole Minimum Conservation Reference Size to 25 cm TL (the current one is 20 cm TL)

# Common sole: summary of scenarios' results (I)

**6 NM TRAWLING  
BAN**



- The implementation of the spatial management measure currently in force (3 nautical miles) with an extension to the 6 nautical miles would have the potential to substantially improve current fisheries exploitation patterns
- Increase of catches for rapido trawls and gillnets

# Common sole: summary of scenarios' results (II)

**INCREASE THE  
SELECTIVITY OF  
GILLNET AND  
INCREASE OF THE  
COMMON SOLE  
MCRS TO 25 CM TL**



- increase in the MCRS to 25 cm TL, shifting the target towards the adult portion of sole population. To avoid the impoverishment of the stock, protecting juveniles that tend to aggregate inshore, it would also be useful to make changes in the mesh size of the small-scale fishery
- A 72 mm mesh size (stretched) would help to avoid the retention of most undersized specimens and a portion of juveniles
- Income at mid-term would raise thanks to the increase of common sole size caught by all fleet segments

# Scenarios to test under FAIRSEA

Target species: *Solea solea*

Target fleet: Rapido trawl

Tools:

Simulations using bio-economic model – BIOECO (developed by COISPA) to evaluate the impacts of potential management actions at the local basin scale, in the short and medium terms, considering spatial and temporal closures

Scenarios to test:

E.g. Effects of temporal and spatial measures (closure of the 6 or 9 nm for 2 or 4 months) following the Italian summer fishing ban in rapido trawl fleet active in Marche region

# THANK YOU FOR YOUR ATTENTION!

