UNIVERSITA' DEGLI STUDI DI PALERMO

Tentative acronym: **BLACKMED – SUSENEN**

Toward an Energy and Environmental Sustainable Fishing in Semi-enclosed Basins: Better Understanding the Role of Natural and Human-made Pressure in Mediterranean and Black Sea

The proposal starts from the experience of the Mazara del Vallo District and tends to the building-up of an integrated knowledge-base for energy and environmental performance of fishing activities in Mediterranean and Black Sea.

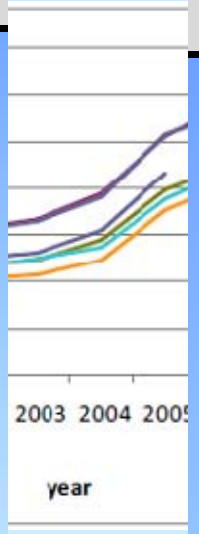
Fishing District of Mazara del Vallo (involving more than 50 firms)
University of Palermo
Tight relationships with the all the Mediterranean countries

LIMITS OF THE MEDITERRANEAN FISHING SECTOR

1) COST OF FUEL

Running a fishing vessels are highly energy demanding. In recent years there was an increase of fuel prices. This event, coupled to the shortage in income due to the poor state of the fish resources, has led to many fishing enterprises to economic collapse.

In many modern industrial fisheries the fuel used by the fishing vessels may be an order of magnitude greater than the nutritional energy embodied in the fish caught.



prices (sour

2) BACKWARDNESS OF FISHING FLEET

It is very important to highlight that both the European and the Italian fishing fleet consist of a big number of vessels over 45 years old, that make it clear the backwardness of the sector.

Table 1. Age of the European fishing fleet
(1st December 2009)

Age class	Number of vessels
0 < 5	4051
5 < 10	5172
10 < 15	4866
15 < 20	4855
20 < 25	6494
25 < 30	6213
30 < 35	4845
35 < 40	3345
>= 45	7399
TOTAL	**47240**

Table 2. Age of the Italian fishing fleet
(1st December 2009)

Age of vessel	Number of vessels
0 - 5	830
5 - 10	923
10 - 15	1295
15 - 20	2221
20 - 25	2784
25 - 30	2264
30 - 35	1256
35 - 40	941
45 and over	1453
TOTAL	**13967**

ENERGY EFFICIENCY – ENVIRONMENTAL IMPACT IN SEMI-ENCLOSED BASINS

The big amount of energy required by the fishing practices and the use of old and poorly efficient technologies involves a high level of environmental pollution, for a given quantity of catch.

Anyway, the catch phase is only one segment of the whole chain of the fish food product.

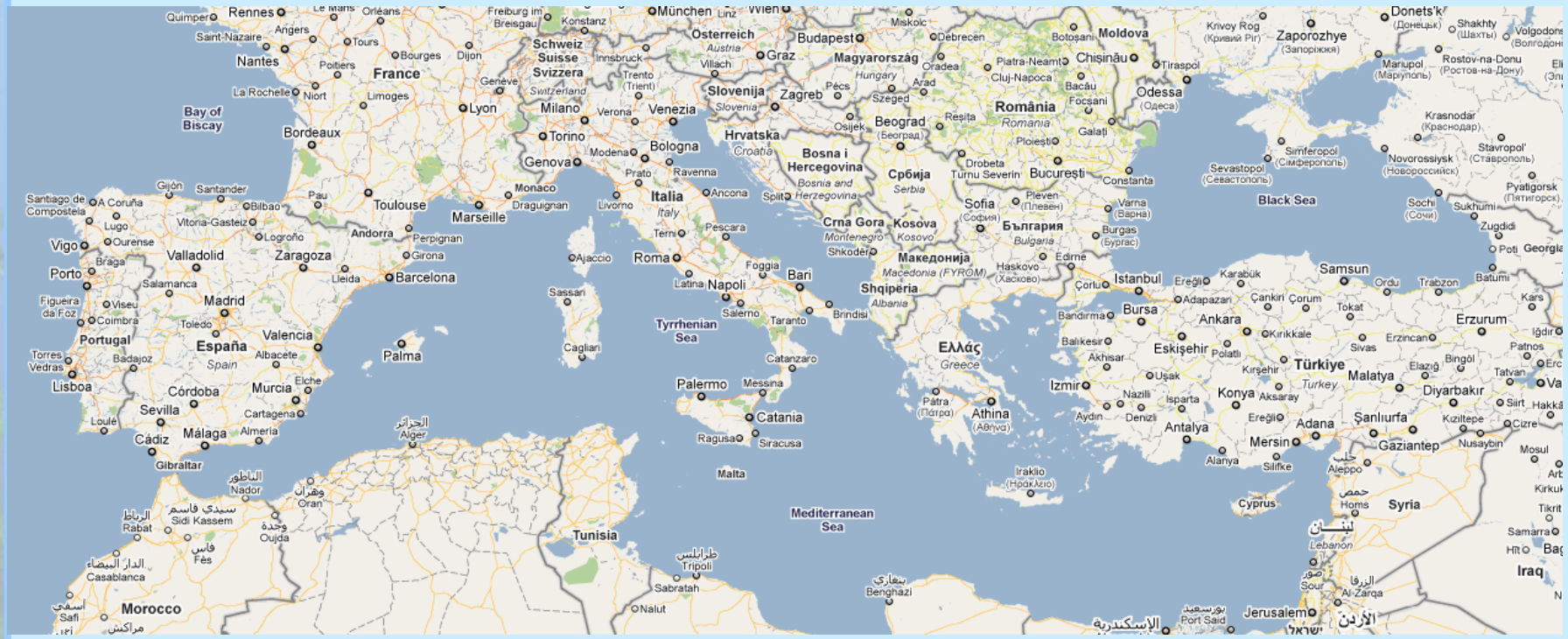
However, several studies suggest that this phase represents the main contribution to environmental impacts, even when different fishing methods and distances to the fishing banks are taken into consideration.

NEED FOR AN INTEGRATED KNOWLEDGE-BASE BY SINGLING OUT PROPER INDICATORS

There is a need for a deeper knowledge of the natural and Human-made pressures exerted in semi-enclosed basins.

As that, further studies should be undertaken in order to provide fishing operators with adequate guidance for assuming proper fishing practices and adopting energy technologies that are more efficient in terms of energy expenditure by unit of revenue.

Analogous studies should be carried out with regard to all countries of the Mediterranean area and of the Black Sea, in order to determine parameters and proper indicators able to dynamically evaluate the efficacy of the policies assessed by countries.



4. **The Human Issues: Work, Economy, Legislation, Country Interrelationship.**
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5. **Ke[illegible]a Better Governance of the Fishi[illegible]n and Black Sea Ba[illegible] Out of Tools for Their Implemen**
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6. **To[illegible]ainable Fishing Common Indicators for the Energy and Environmental Performances in Semi-enclosed Basins (Mediterranean and Black Sea).**
7. **Common Lessons from the Mediterranean and Black Sea Comparison.**

Environmental Sustainable Fishing in Mediterranean and Black Sea