

**GFCM - SAC-SCSS-SCMEE-SCSA Transversal Workshop
on
Spatial Based Fishery Management**

6-8 Feb 2012

**A conceptual framework for the protection of
vulnerable habitats impacted by
fishing activities in the Mediterranean high seas**

[Ocean and Coastal Management (2010) 53:717-723]

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Motivation

- Mediterranean fisheries management
 - EAF vs TROM (stock assessment)
 - MPAs vs technical management
 - Multispecies
 - Multigear
- High seas vs territorial waters
- Identification of sites

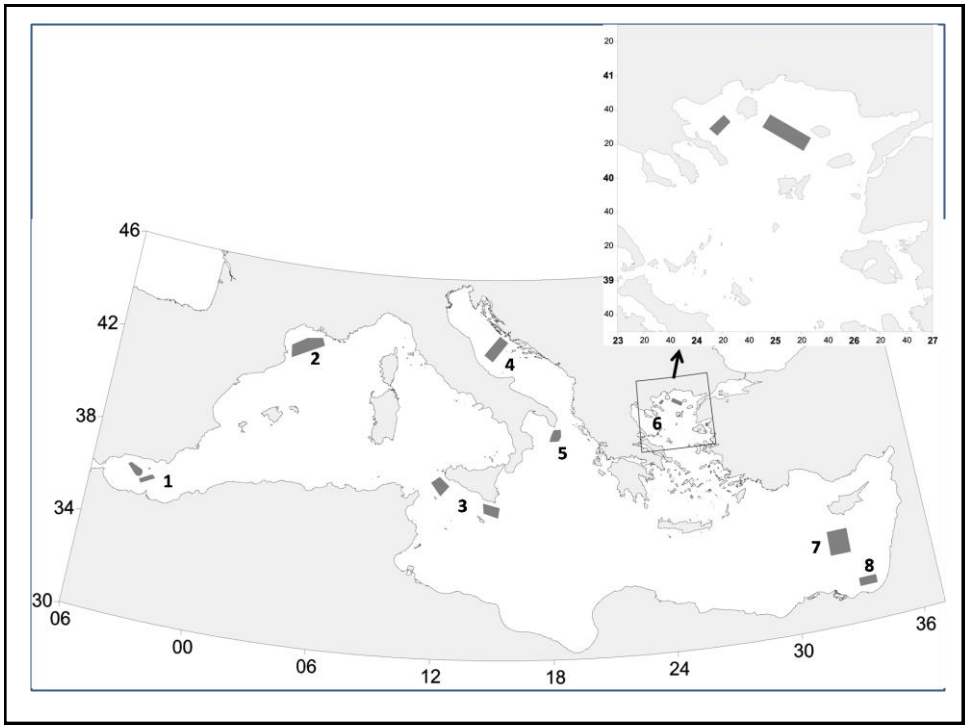
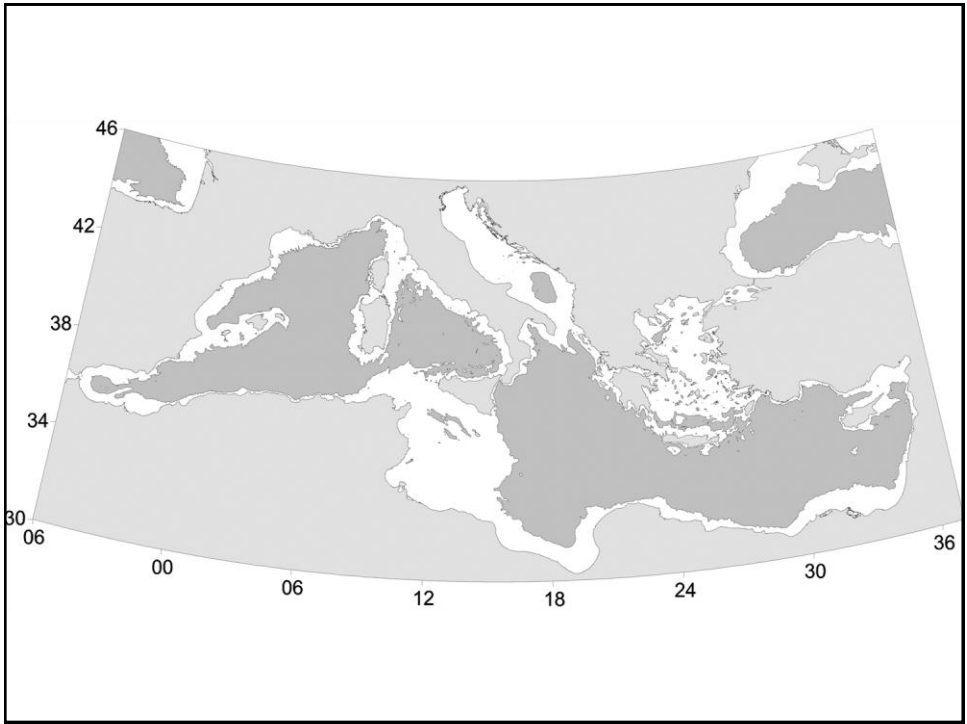
UNEP RAC/SPA financed this study under the framework of the program
“Fisheries management/conservation and step-relief areas in the Mediterranean
open seas, including deep seas”

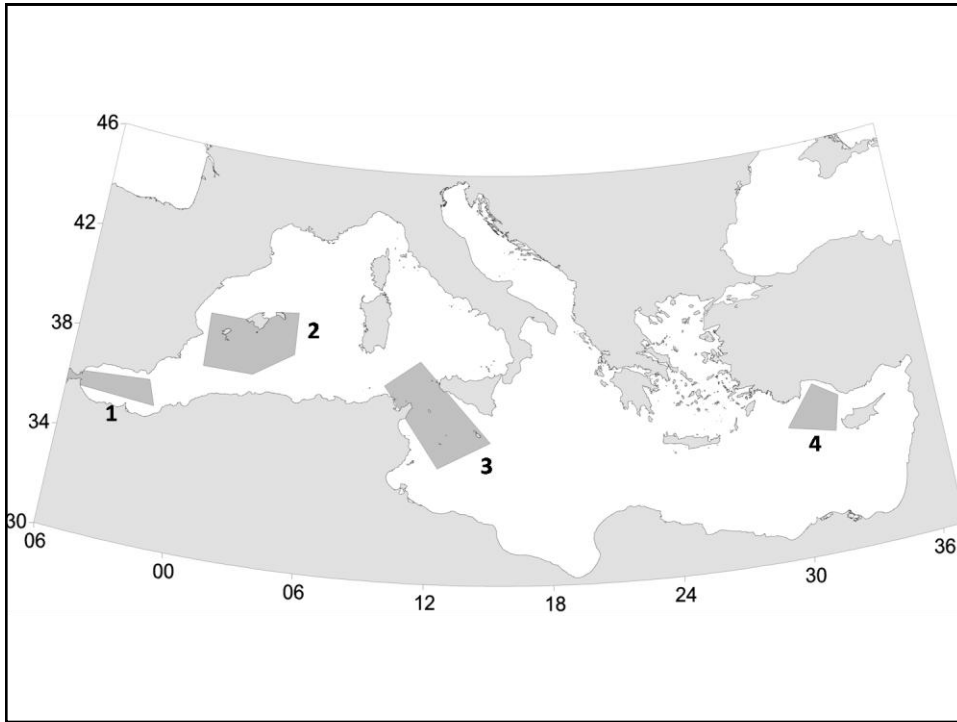
Criteria for identifying areas vulnerable to fishing

- Essential Fish Habitats (EFH) refers to those waters and substrate necessary for fish for
 - spawning,
 - feeding or
 - growth to maturity.
- Sensitive Habitats (SH)
 - harbour complex ecosystems highly vulnerable or
 - support organisms that are of interest because of their rarity,
 - e.g. seagrass meadows and maërl beds.

Areas vulnerable to fishing activities in the Mediterranean high seas

- Demersal
- Pelagic
 - Only large pelagics are of interest in high seas
 - Since the study is devoted to high seas, no proposals for area protection addressed to small pelagics are included





<u>Habitat</u>	<u>Site</u>	<u>Location</u>	<u>FAO</u>	<u>GFCM</u> <u>-GSA</u>	<u>Depth (m)</u>	<u>Extension</u> <u>(Km²)</u>	<u>Current</u> <u>protection</u>	
Demersal	Essential Fish Habitats	Adventure and Malta banks	Ionian Sea	37.2.2	15-16	100-200	7,023	
		Samothraki and Strymonikos banks	Aegean Sea	37.3.1	22	180	116	
		Gulf of Lions slope	NW Mediterranean	37.1.1/2	6-7	100-1200	8,087	FRA
		Jabuka Pit	Adriatic Sea	37.2.1	17	150-280	5,481	
	Sensitive Habitats	Santa Maria di Leuca	Ionian Sea	37.2.2	19	425-1110	2,183	FRA
		Nile Cold Seeps	E Mediterranean	37.3.2	26	300-800	4,374	FRA
		Erathostenes seamount	E Mediterranean	37.3.2	26	690-2000	10,295	FRA
	Alboran Sea seamounts	W Mediterranean	37.1.1	1-2-3	50-1500	3,626		
	Bottoms deeper than 1000 m	Mediterranean basin	-	-	<1000	1,459,000	GFCM	
Pelagic	Migratory routes	Strait of Gibraltar and Alboran Sea	W Mediterranean	37.1.1	1-2-3	-	9,000	
		Sicily channel	Central Mediterranean	37.1.3	10-16	-	97,679	
	Nurseries	South of Balearic Islands	NW Mediterranean	37.1.1	4-5	-	84,348	
		North of Levantine Sea	E Mediterranean	37.3.2	26	-	29,992	
	Cetacean sanctuary	Sanctuary in Ligurian Sea	NW Mediterranean	37.1.2/3	7-8-9		87,500	SPAMI

Approximate percentages of protected surface area of the Mediterranean Sea

GFCM towing ban beyond 1000m depth	57.8%
Pelagos Sanctuary	3.5%
GFCM FRAs	0.7%
National MPAs, no take areas and SPAMIS (Pelagos excluded)	0.4%
Demersal: Present proposal	1.7%
Pelagic: Present proposal	9.6%

Some further remarks 1/2

Report of the Transversal Workshop on Marine Protected Areas (MPAs) (GFCM & RAC/SPA)
Salammbô, Tunisia, 24 and 25 May 2007

- g. The size and connectivity of MPAs have been recognized as key issues regarding fishery sustainability. MPA size depends on the mobility of the target species, and protection of 20% of fishing grounds has been considered a sound reference point to have a real effect on the stocks.

ftp://ftp.fao.org/FI/DOCUMENT/gfcm/mpa/2007/ReportMPA_2007-final.pdf

Some further remarks 2/2

CBD Strategic Plan for Biodiversity 2011-2020, including Aichi Biodiversity Targets

Target 11

By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

<http://www.cbd.int/sp/targets/>

Google maps tool 1/3

- Bathymetry.
50, 100, 200, 1000, 2000, 3000, 4000, 5000 m
- Undersea features.
 - Includes all geomorphological features with a published name.
 - About 35 types of features (the most common, seamounts, canyons, ridges, plains, etc.).
 - The map contains a total of about 450 georeferenced points.
- Temperature and productivity.
Charts of surface temperature and productivity from 2003 to 2008, by summer and winter, mean and by year are presented.

<http://www.cmima.csic.es/en/ide>

Google maps tool 2/3

- MPAs.
 - UNEP RAC/SPA SPAMIS,
 - GFCM FRAs (Fishing Restricted Areas),
 - MPAs for cetacean conservation,
 - proposals for tuna sanctuaries
 - all MPA appeared in MEDPAN and MPAGLOBAL websites.

A number of about 280 MPAs are included. In most cases associated to the website that containing its description

- Boundaries, subareas and grids.
 - subareas defined by FAO for statistical purposes, and GFCM.
 - 10 and 50 km grids promoted by the European Union for environmental purposes

<http://www.cmima.csic.es/en/ide>

Google maps tool 3/3

- Jurisdictions.
 - internal waters,
 - historical bays,
 - territorial waters,
 - archaeological contiguous area,
 - fishing protection zones,
 - ecological protection zones,
 - exclusive economic zones,
 - high seas,
 - and other particular jurisdictions.

<http://www.cmima.csic.es/en/ide>