# Endangered species of inshore waters

ECOLOGY, THREATS AND SUGGESTED MANAGEMENT ACTIONS MEDAC working group on recreational fisheries

# The species





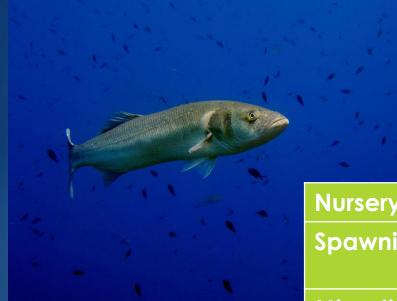








# The ecology – Dicentrarchus labrax



Nursery grounds	Inshore and brackish waters
Spawning grounds	Inshore waters (salinity), One big female with several males
Migrations	Euryhaline (temperature),
Breeding season	Winter (temperature)
Main habitats	Coastal and brackish waters.
Other	Differences Atlantic – Med, Aggregations of adults, Gonochoric

# The ecology – Sparus aurata



Nursery grounds	Inshore waters (big protected sandy bays)
Spawning grounds	Inshore waters
Migrations	Brackish waters (summer)
Breeding season	October – December, big shoals
Main habitats	Inshore waters (all habitats) until 150m
Other	Aggregations (winter high pressures), Hermaphrodite (first male)

# The ecology – Dentex dentex



Nursery grounds	Shallow rocky habitats and Posidonia
Spawning grounds	Near the coast
Migrations	Thermocline and food
Breeding season	March – May (aggregations)
Main habitats	Hard bottoms (up to 200m)
Other	Gonochoric

## The ecology – Epinephelus marginatus



Nursery grounds	Inshore roky waters, tidal pools and Posidonia meadows?
Spawning grounds	Rocky bottoms (littoral and circalittoral area). Aggregations.
Migrations	Demersal, benthic and littoral (temperature, feeding) up to 120m
Breeding season	June to August
Main habitats	Rocky bottoms and Posidonia?
Other	Hermaphrodite (first female)

# The ecology – Sciaena umbra



Nursery grounds	Inshore and estuarine
Spawning grounds	Mouth of estuaries?
Migrations	Sedentary, strong site-fidelity
Breeding season	May-July
Main habitats	Rocky coast, estuaries?

# The ecology – Umbrina cirrosa



Nursery grounds	Coastal and sandy bottoms
Spawning grounds	Sandy bottoms
Migrations	Demersal, benthic and litoral (0- 100m)
Breeding season	Spring and summer
Main habitats	Littoral waters (rocky, sandy, seagrass)
Other	Juveniles gregarious, adults solitary or small groups



Threats - External	Threats - Fisheries
Antropization (ports?)	MLS
Loss of brackish water habitats	Commercial in estuaries
Great stormy episodes	Unknown RF catches
Climate change (sex ratios)	Stakeholders knowledge about vulnerability
Lack of knowledge	MLS and bag limits
Escapes from aquaculture	Reclusion from lagoon aquaculture
Volume freshwater into sea	Large spawners (commercial)
	Illegal sales
	Lack of specific management



#### Management suggestions

Stock assessment (including RF) All catches registered MCRS (40 cm) Specific management measures (commercial and RF) Increase controls (capacity training RF) Closed season (spawning) Harmonize regulations sea and freshwater

Estuaries banned to commercial and passive gears

Minimum distance from the shore to commercial gears

Increase research

Avoid aquaculture escapes

Educational programs species (commercial and RF)

MAP

MPA



Threats - External	Threats - Fisheries
Depletion of feeding resources	MLS
Loss of brackish water habitats	Big aggregations (purse seines)
Escapes from aquaculture	Lack of knowledge ecology
Volume freshwater into sea	Stakeholders knowledge about vulnerability
	MLS and bag limits
	Lack of specific management
	Overfishing



#### Management suggestions

Stock assessment (including RF)

All catches registered

MCRS

Specific management measures (commercial and RF)

Increase controls (capacity training RF)

Closed season (spawning)

Ban to purse seines and TAC in coastal lagoons

Estuaries banned to commercial and passive gears

Minimum distance from the shore to commercial gears

Increase research

Avoid aquaculture escapes

Educational programs species (commercial and RF)

MAP

MPA



Threats - External	Threats - Fisheries
	MLS
	Compliance with regulations (RF)
	Big aggregations (trawlers and morunas)
	Large spawners with alive bait (commercial and RF)
	Illegal sales
	Overfishing (30-50% declines)



#### Management suggestions

Stock assessment (including RF) All catches registered MCRS Specific management measures (commercial and RF) Increase controls (capacity training RF) Closed season (spawning) Avoid or reduce commercial catches of big aggregations Avoid alive bait Review RF gears during spawning Increase research MAP Educational programs species (commercial and RF) MPA



Threats - External	Threats - Fisheries
Virus	MLS
	Lack of effective management (spearfishing, angling and small-scale)
	Unknown RF catches
	Stakeholders knowledge about vulnerability
	Illegal sales
	Overfishing (50 - 95% decline)



#### Management suggestions

Stock assessment (including RF)

All catches registered

MCRS (50 cm)

Specific management measures (commercial and RF)

Increase controls (capacity training RF)

Closed season (spawning)

Avoid or reduce commercial catches of big aggregations

Nursery habitats protected (juveniles)

Increase research

MAP

Educational programs species (commercial and RF)

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MPA
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Threats - External	Threats - Fisheries
Antropization	Set MLS
Loss of Posidonia habitats and ports construction	Overfishing (declines up 67%), mainly spearfishing and trammel nets
Lack of knowledge	Unknown RF catches
	Stakeholders knowledge about vulnerability
	Lack of specific management



#### Management suggestions

Stock assessment (including RF)

All catches registered

MCRS

Specific management measures (commercial and RF)

Increase controls (capacity training RF)

Closed season (spawning)

Nursery habitats protected (juveniles)

Increase research

MAP

Educational programs species (commercial and RF)

MPA



Threats - External	Threats - Fisheries
Antropization (estuaries, ports, beaches)	MLS
Lack of knowledge	Commercial in estuaries
	Overfishing (declines 67%)
	Stakeholders knowledge about vulnerability
	MLS and bag limits
	Lack of specific management



#### Management suggestions

Stock assessment (including RF)

All catches registered

MCRS

Specific management measures (commercial and RF)

Increase controls (capacity training RF)

Closed season (spawning)

Estuaries banned to commercial and passive gears

Increase research

MAP

Educational programs species (commercial and RF)

MPA

# Working plan 2017-2018 proposal

Recreational fisheries and science in the Mediterranean	
What do we have	<ul> <li>a) Compile existing papers on RF (Med or marine related)</li> <li>b) Identify scientists working on RF</li> <li>c) Identify existing platforms for knowledge exchange</li> </ul>
	Classify type of information about papers compiled and assess validity (currently useful, flaws)
What is lacking	Identify research needs for Mediterranean RF

# Thank you and good 2018 work!