

Accelerating the Recovery of the European Eel

San Servolo, Venice 28-30 May 2012



How far have we gone with the implementation of the Portuguese EMP(s)?



Isabel Domingos



Center of Oceanography, Faculty of Sciences, University of Lisbon, PT <u>idomingos@fc.ul.pt</u>



Fishery regulation

Separate management for marine and freshwater areas



Marine jurisdiction DGPA

11 specific byelaws applied to 11 fishing areas in coastal waters (estuaries and coastal lagoons)

The fishery in marine jurisdiction











- Boats less than 9 m long (open decks)
 - Minimum legal size 22 cm
 - 11 specific regulations regulate

fisheries in the most important brackish water fishing areas





Restaurant Constantino das Enguias - ALMEIRIM

An industry



http://www.comur.com

Created in 7 th November 1941

Trade of alive eels

IMPORTED EELS





Tons









Regulation (EC) 1100/2007





THERE IS A COMMON GOAL SHARED BY ALL Member States...

Objective of each EMP

Reduce anthropogenic mortalities so as to permit with high probability the escapement to the sea of at least 40 % of the silver eel biomass relative to the best estimate of escapement that would have existed if no anthropogenic influences had impacted the stock. The Eel Management Plan shall be prepared with the purpose of achieving this objective in the long term. (Article 2, n° 4).

Regulation (EC) 1100/2007





Portuguese EMP(s)

2 EMP('s)

- The Portuguese EMP (National implementation)
- Transboundary EMP for the international part of River Minho

The Portuguese EMP was approved by the European Commission in April 2011. Some measures have been implemented.

Transboundary EMP Minho

Delivered in June 2011 Revised in November 2011 Not approved yet

RESTRICTIONS ON FISHERY

Closed season during silver eel migration Reduce number of fishing licences Report eel catches in freshwater areas



INCREASE THE AMOUNT OF AVAILABLE HABITAT

Removing obstacles to migration Fitting eel and elver passage facilities to existing obstacles Stocking areas above dams and transport silver eels below dams

SET ACTION PLAN AGAINST GLASS EEL POACHING

COLLECT DATA

Recruitment Natural and anthropogenic mortality Silver eel escapement



FISHERY

Fishing closure in marine jurisdiction (Oct-Dec)

INCREASE THE AMOUNT OF AVAILABLE HABITAT

A fish pass has been installed in a dam (3.5 million euros but...)

SET ACTION PLAN AGAINST GLASS EEL POACHING

Increase in fiscalization but NO plan

COLLECT DATA

NO funding to collect data (DCF and WFD too restrict and not useful for stock assessment)

Glass eel fishery





Obstacles to migration



A solution... but who is going to pay the bill?

Anguillicoloides crassus



Is there anything we can do?





- a) Epidemiology descriptors;
 - Intact (SDI = 0)
 - Moderate damages (SDI = 1-3)
 - Severe damages (SDI ≥ 4)
- b) Proportion of damages (%)
 - Prevalence (%)
 - Intensity (median & interquartile range)
 - SDI (median & interquartile range)

Mortality by predation



The European otter (Lutra lutra)







The Lusitanian toadfish (Halobatrachus didactylus)



Red swamp crayfish (Procambarus clarkii)



How can this information be used? Conservation conflicts with other species...

Game birds?

(1) Dias, 2007; (2) Trigo, 1994; (3) Cerqueira, 2005

SWOT Analysis



Anthropogenic Impacts



Important eel fishery since the XVII century!!!
Opening to the sea artificially managed (4 to 6 weeks)
Classified as a Protected Area (Natural Reserve) in 2000
Important nursery area for marine species

SWOT ANALYSIS



Anthropogenic Impacts

Sto André Lagoon



Santo André Lagoon

Sampling October-February (2011/2012)



N		133	TL	Age
Mean			349.8	2,6
Variance			5392	0,531
Median			342	2
Quartile 25			316.0	2
Quartile 75			370	3



Yellow and silver eel fishing		
The management target is being achieved		
The fishery is well managed	-	
Mortality during fishery is minimised		
The fishery has negligible impacts on bycatch		
The fishery has negligible impacts on rare or other protected species		
The fishery has negligible impacts on habitats		
Research/education - bonus		

Management target 40% ESCAPEMENT ????