

Pêches durables, où en sommes-nous ? / Sustainable fisheries: where do we stand?

Conference/Debat with Pr. Ray HILBORN,
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FROM OVERFISHING TO THE MSY TARGETS: DID THE COMMON FISHERIES POLICY SUCCEED, FOR FISH STOCKS, FISHERIES AND ECOSYSTEMS?

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Introduction: a slow birth for MSY in the EU



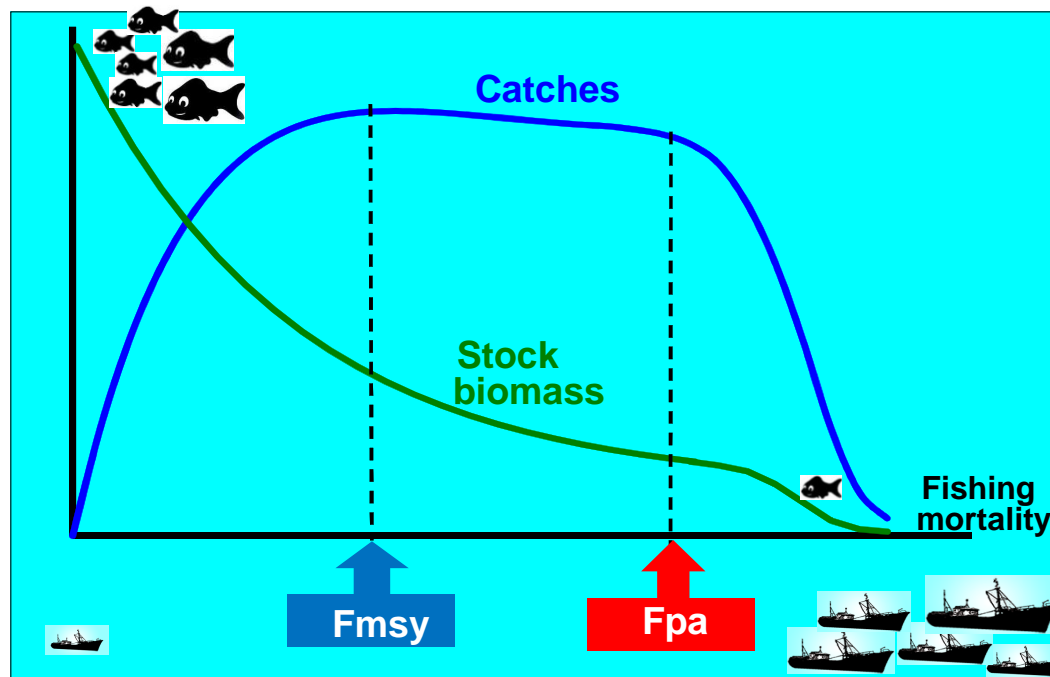
1949	Convention of the NW Atlantic fisheries (ICNAF -> NAFO) Inter-American Tropical Tuna Commission (IATTC)	The MSY defined as the target...
1955	Conference of the United Nations on fisheries, Rome	... worldwide
1959	Convention of the NE Atlantic fisheries (NEAFC)	?
1976	ICES EG: Fishing at Fmsy implies <i>considerable dangers</i>	
1982	UN Convention on the Law of the Sea (UNCLOS)	EEZs set up
1983	Start of the Common Fishery Policy (CFP)	TAC... but no target
1998	Precautionary Approach approved in EU/ICES	Fpa & Bpa as targets
2002	WS on Sustainable Development, Johannesburg	Bmsy in 2015
2009	Adoption of the ICES transition scheme to Fmsy	The Fmsy as an European target



Introduction: a slow birth for MSY in the EU

The current challenge in Europe:

- changing from the (so called) precautionary approach (Fpa and Bpa)
- ... to the Fmsy target



The objective:

Decrease the fishing mortality

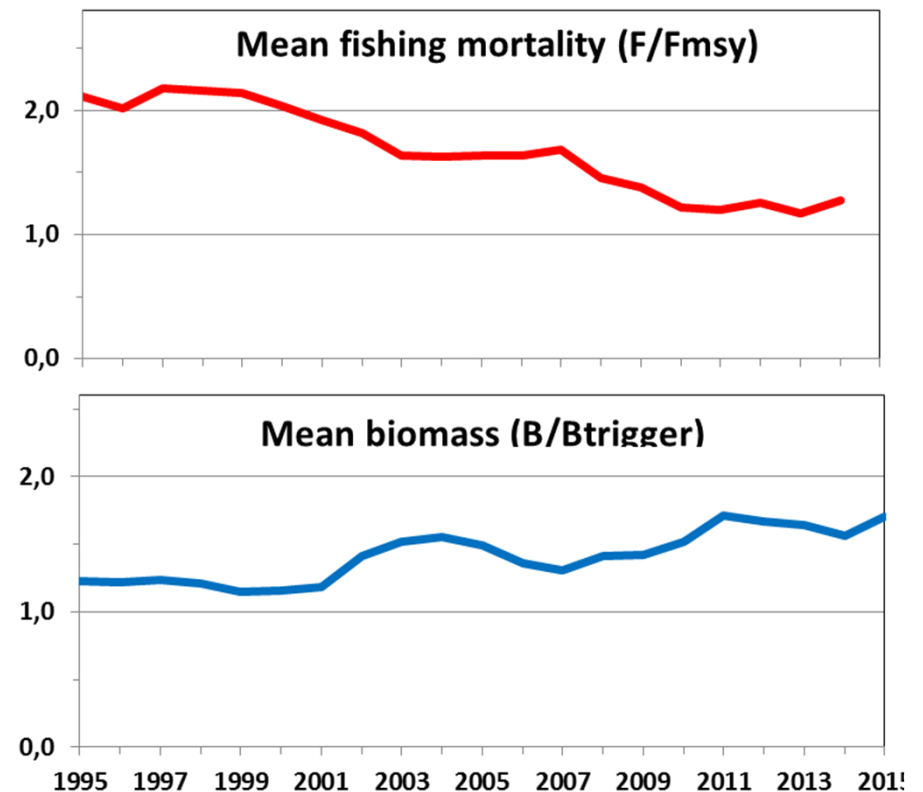
- Towards stocks recovery
- and towards better catches



Stocks status: where do we stand in European seas?

- The very last exhaustive synthesis : 48 stocks in European Atlantic waters (except ins the Baltic - AFH 2016, from ICES assessment and STECF)

- A severe overfishing in the 1990s
- A large decrease in the 2000s
- No clear trend since 2010
- Biomass close to the minimum threshold in the 1990s
- A 40 % increase in the 2000s
- No clear trend since 2010





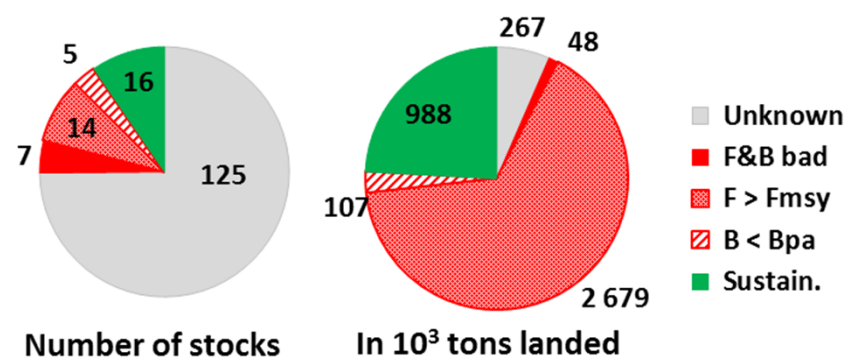
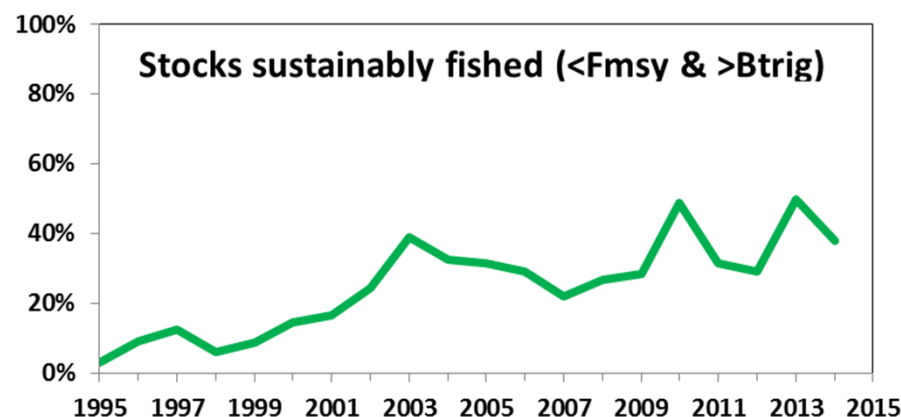
Stocks status: where do we stand in European seas?

- The very last exhaustive synthesis : 48 stocks in European Atlantic waters (except ins the Baltic - AFH 2016, from ICES assessment and STECF)

- 90% of (assessed) stocks overfished in the 1990s
- 50-70 % today

For the last year (167 stocks)

- A huge number of (small) stocks are not fully assessed
- 38% of assessed stocks, i.e. 10% of all ICES stocks, in the “green”
- 25% of the landings

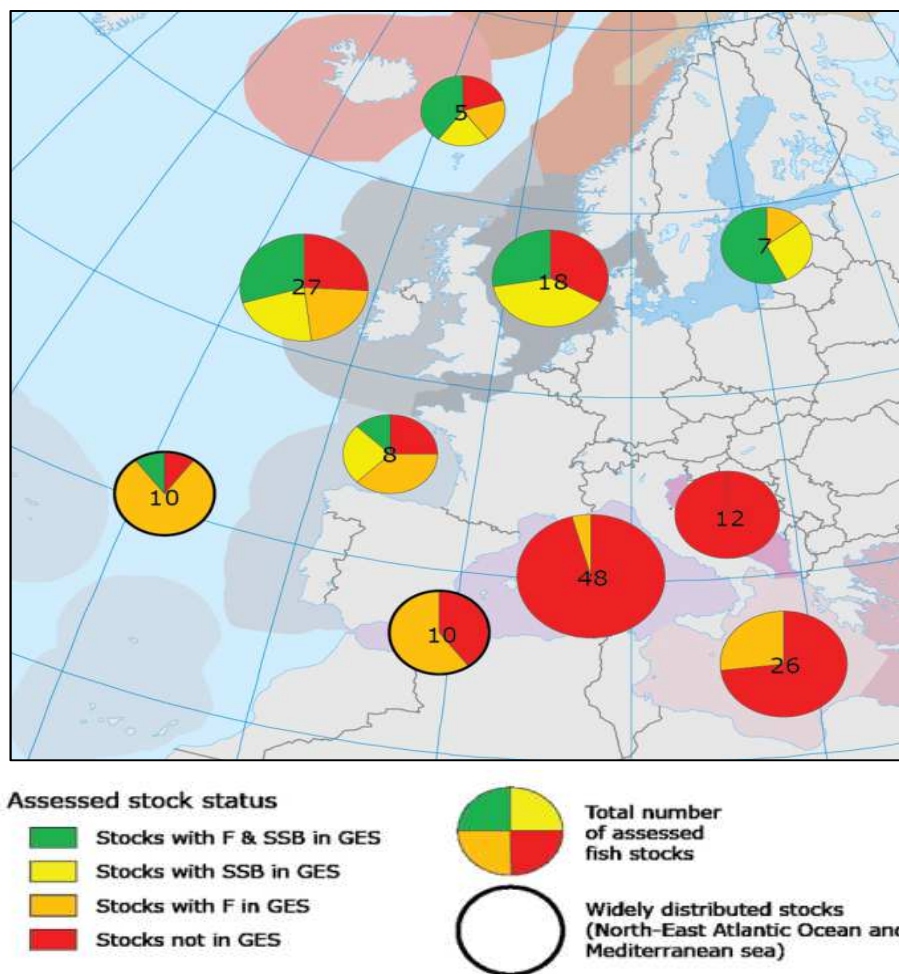




Stocks status: where do we stand in European seas?

- The 2015 synthesis by the European Commission (stock status in 2013 from ICES, STECF and GFCM assessments)

- Atlantic: 28 % of assessed stocks sustainably fished ($F < F_{msy}$ & $B > B_{trig}$)
- Mediterranean sea: 0 % !! (9% in STECF 2016)

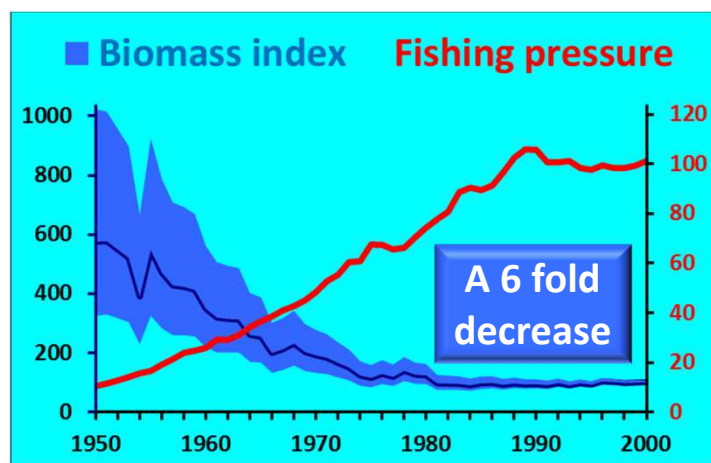


Stocks status: where do we stand in European seas?

- The take-home message:
 - Stocks started to recover in the Atlantic ...
 - ... but we are still far from the CFP targets (not only in the Medit. sea),
 - and the virtuous machine seems to be down (a question of political will?)

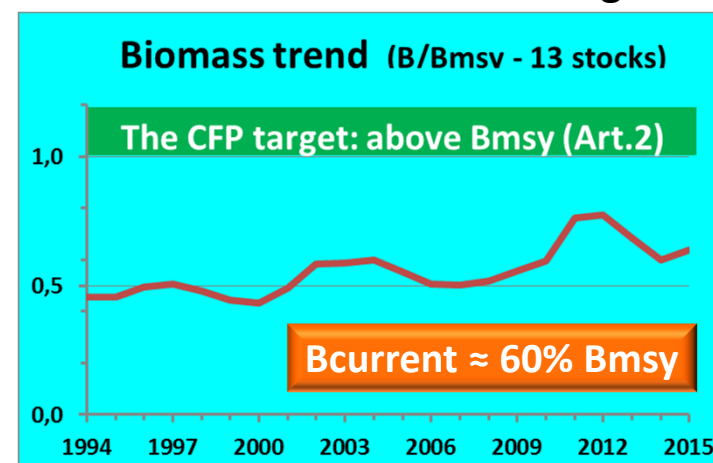
- Don't forget:

From where do we come from



(Celtic sea & Bay of Biscay, Guénette et al. 2012)

Where the CFP intends to go



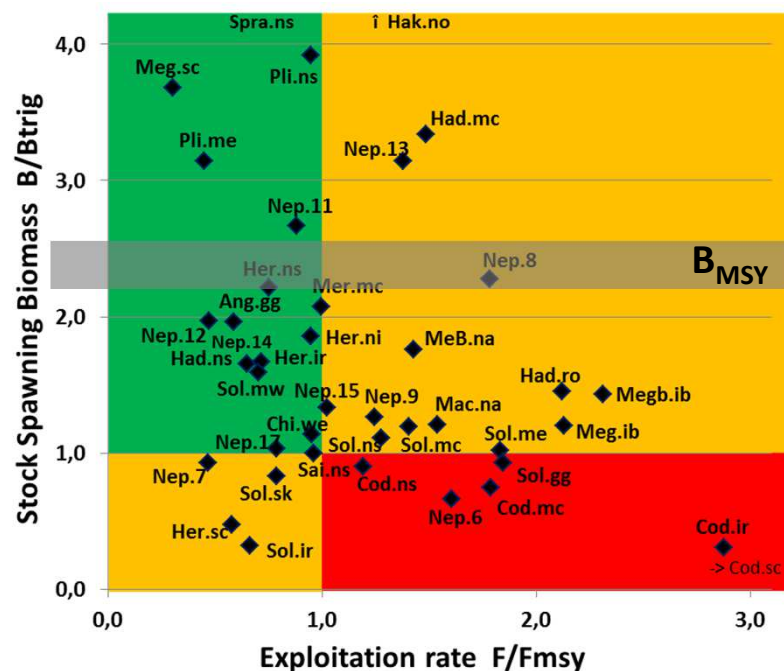
(From 2015 ICES assessment and AFH 2016)



Stocks status: where do we stand in European seas?

- The take-home message:
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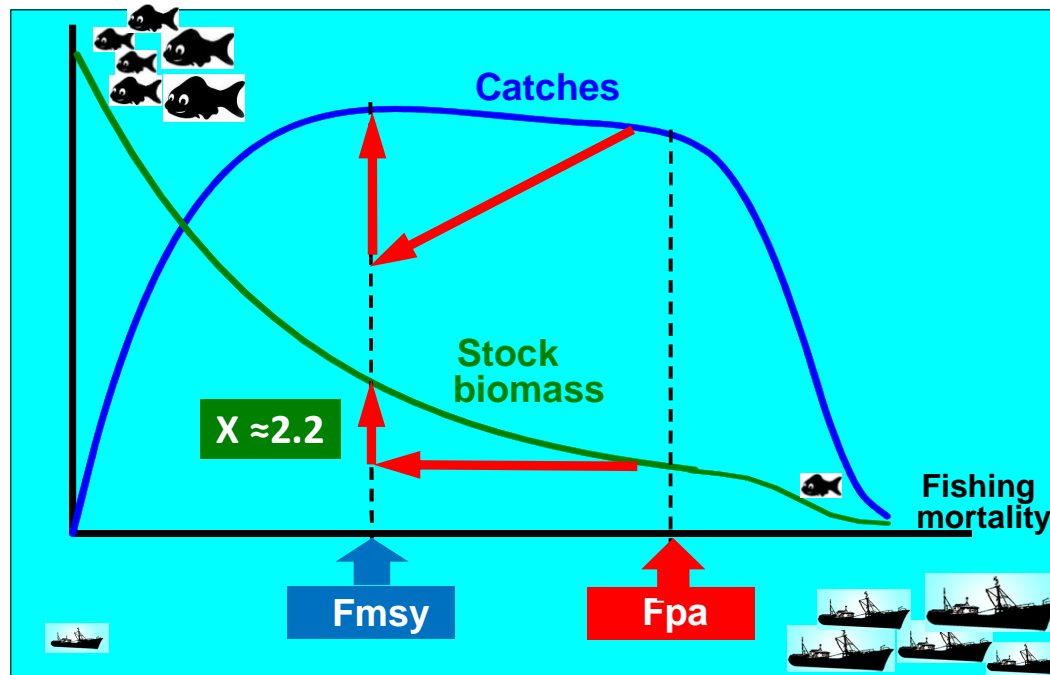
- Don't forget:
 - A huge variability between stocks
 - ... and few stocks in the “real green”



Stocks status: where do we stand in European seas?

The current challenge in Europe: changing from F_{pa} to F_{msy}

➤ Where we intend to go

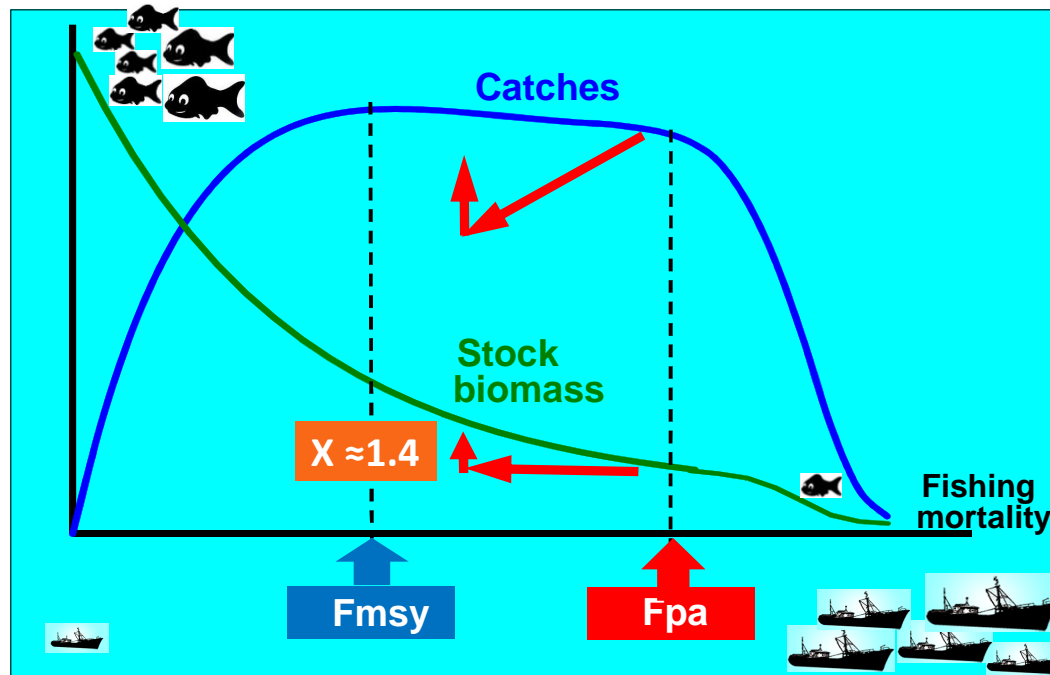




Stocks status: where do we stand in European seas?

The current challenge in Europe: changing from Fpa to Fmsy

- Where we intend to go
- **Where do we stand**



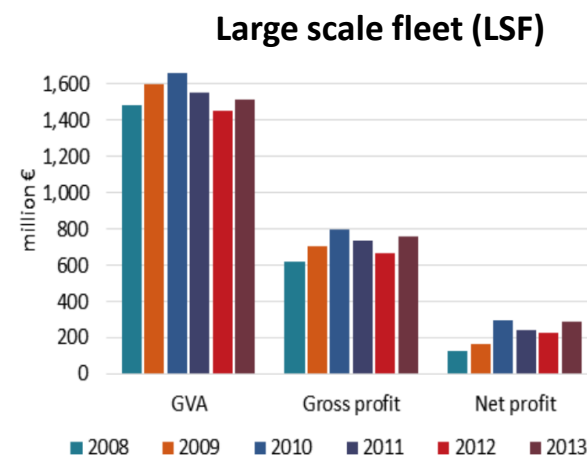
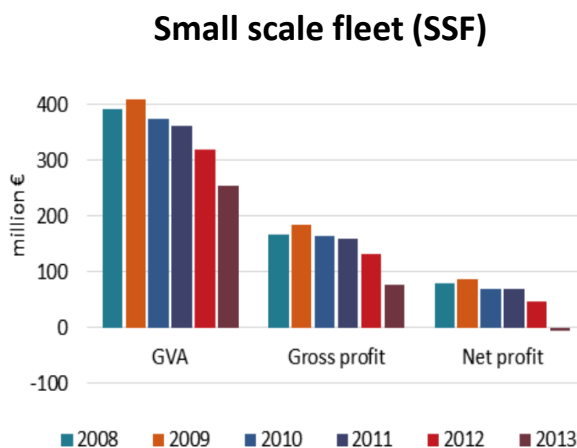
... in the middle
of nowhere ?



Trends in economic indicators (AER, 2015 - 15 countries)

- Small-scale fleets have **deteriorated***
(GVA -32%, Gross profit -52%, Net profit -109%)

- large-scale fleets have **improved***
(GVA -2%, Gross profit +7%, Net profit +39%)



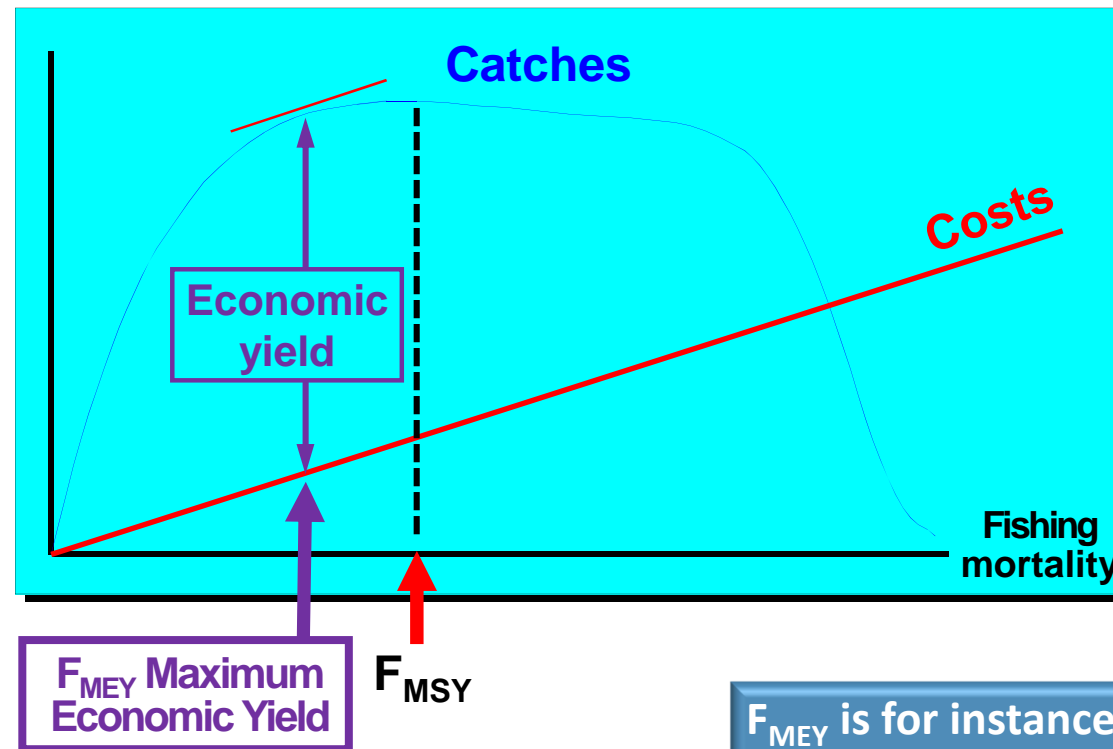
- Current state? No real-time diagnosis, but several positive economic factors
 - Landings decreased, but prices increase
 - Less players in the system
 - Low fuel price

=> Short term factors?

* 2013\2008-2012

Is the MSY target the right one?

- Maximizing economic outputs of fisheries implies lower F than F_{MSY}



F_{MEY} is for instance a management target in Australia, South Africa, ...

Is the MSY target the right one?

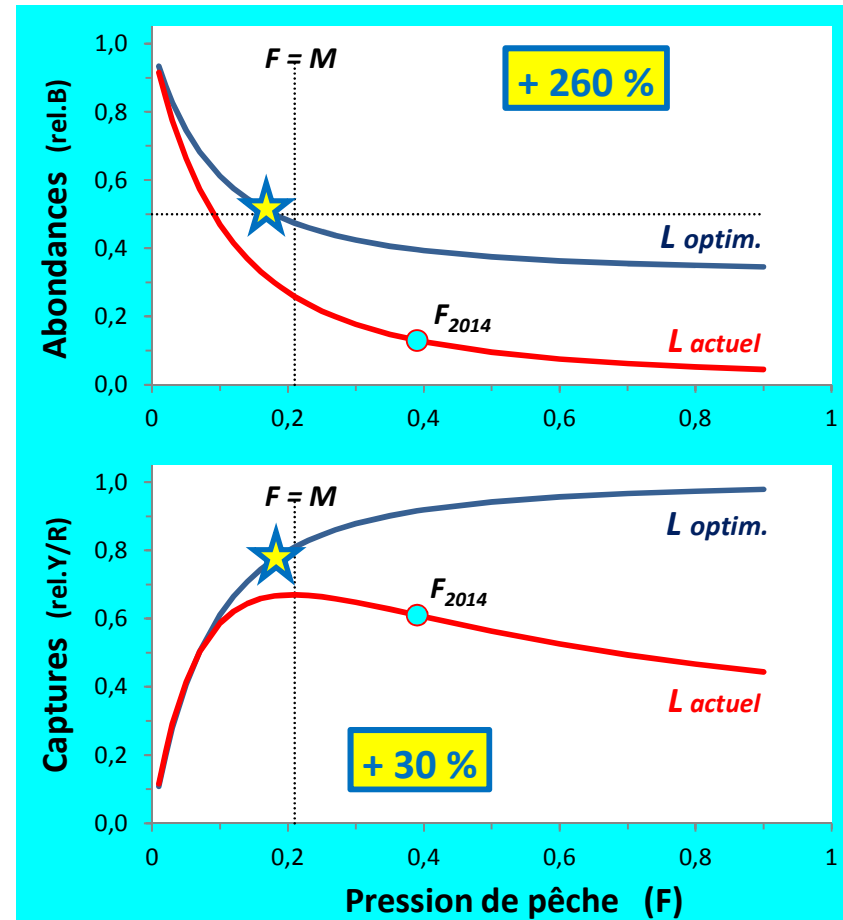
- From MSY... to optimized management
- By increasing Minimum legal sizes, it is possible to fish more impacting less

Minimizing the impact of fishing

- let fish grow and reproduce
- take less than nature

(Froese, Gascuel et al., Fish&Fish. 2016)

Changing MLS: the NS cod example





Is the MSY target the right one?

➤ Ecosystem indicators (STECF EWG 2012, Gascuel et al. 2016)

■ Based on landings

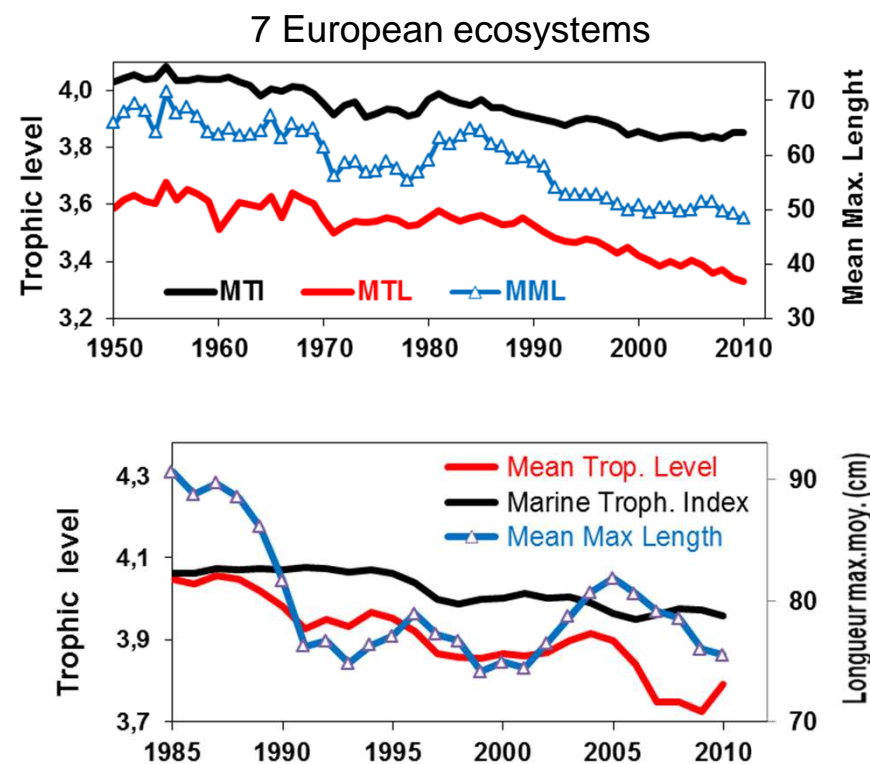
- Marine trophic index (**MTI**) -0.2
- Mean trophic level (**MTL**) -0.4
- Mean max. length (**MML**) -19 cm

■ Based on surveys (≈20 000 hauls)

- Marine trophic index (**MTI**) -0.15
- Mean trophic level (**MTL**) -0.25
- Mean max. length (**MML**) -15 cm

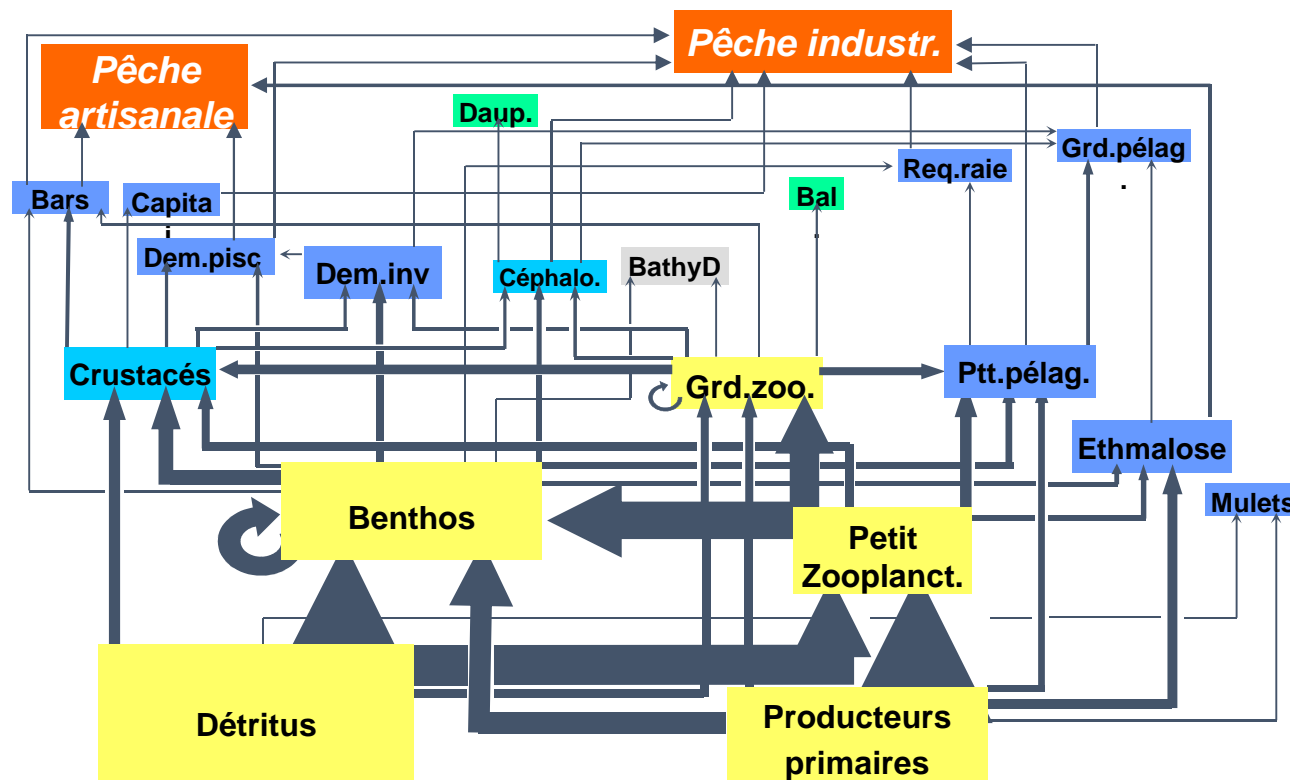
A continuous decline ("fishing through" & "fishing down")

No recovery at the moment



Is the MSY target the right one?

- Facing the ecosystem complexity, the precautionary approach implies **minimizing the ecosystem impact of fishing**



Guinean
Ecopath
model
(Gascuel et
al., 2009)

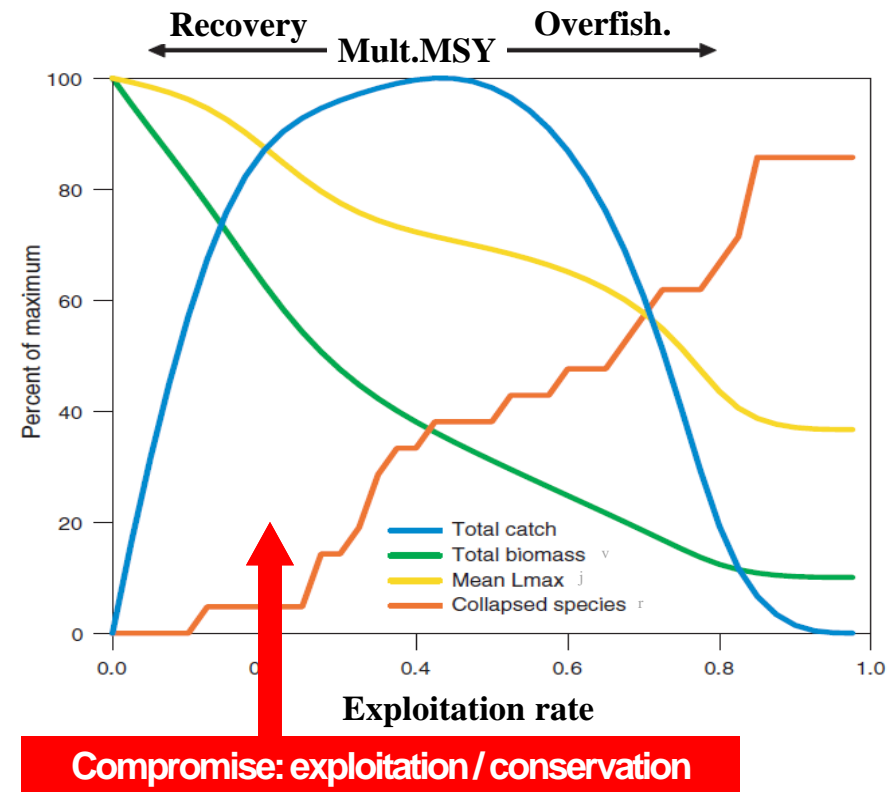
Is the MSY target the right one?

Exploitation/conservation trade off:

➤ Take less than the MMSY

In order to

- Minimize the number of collapsed stocks
- Increase **biodiversity** and ecosystem **resilience**
- Increase the **stability** of catches, and the **profitability** of fisheries



(Worm, Hilborn et al., 2009)

Conclusion

- For fisheries management, the EU has long been the “bad boy in the developed countries class”
- Things have started to change, and N.E. Atlantic stocks to recover
- ... but we are still far from the F_{MSY} ... and even more from the B_{MSY} international commitment,
- ... while we already know that the MSY targets are not conservative enough

for fish, fisheries and ecosystems