Marine Fisheries

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Demersal fishery in the Adriatic Sea (C6F)

2020 International Forum on the Effects of Climate Change on Fisheries & Aquaculture
25-26 February 2020, Rome

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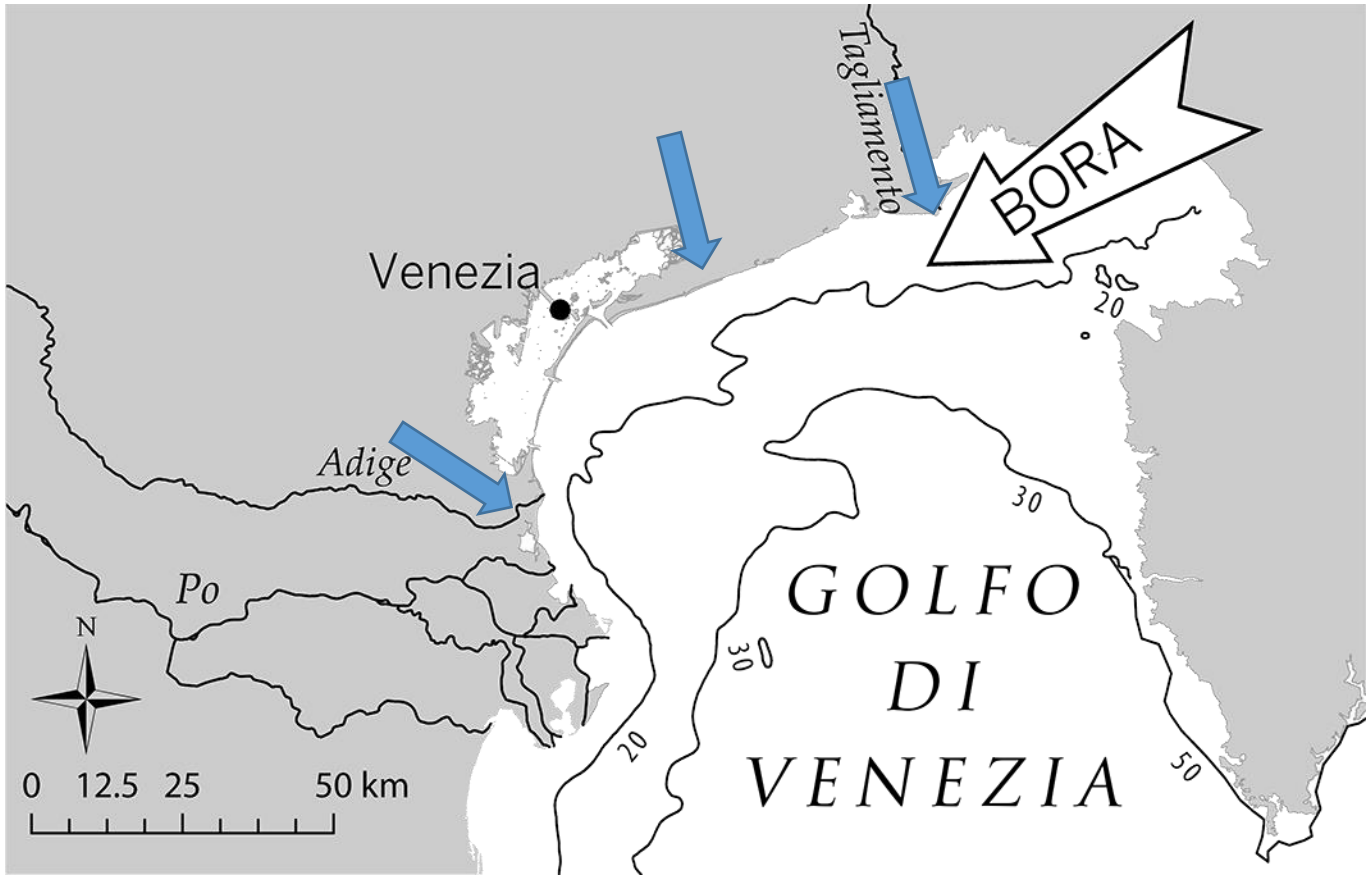
Peculiar morphological features



Northern Adriatic lacuna

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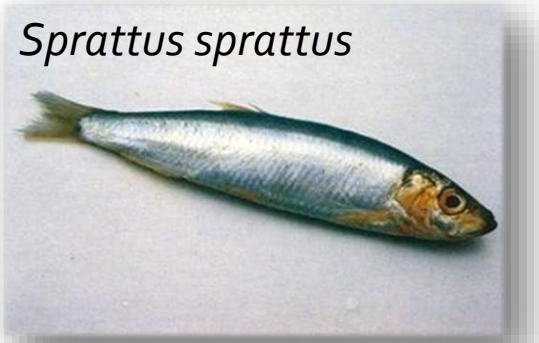
Glacial relicts

Fucus virsoides

Littorina saxatilis

Platichtys flesus

Sprattus sprattus



Crangon crangon

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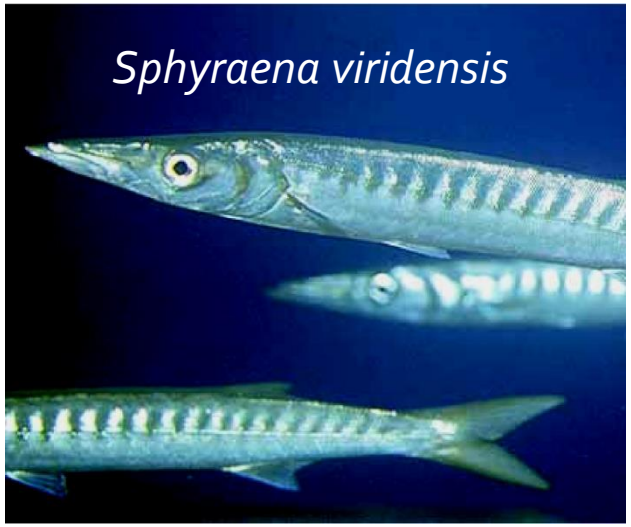

Non-native thermophilic species

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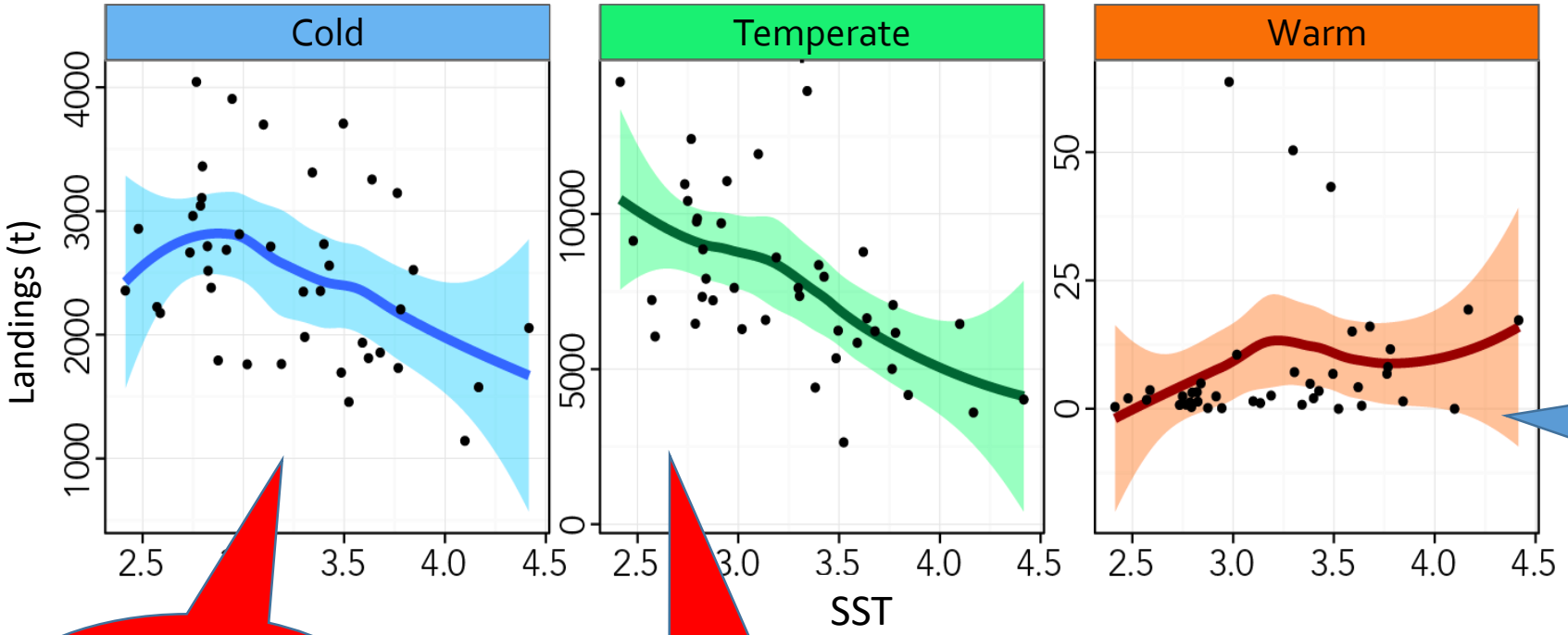

Time series analysis

Few effects (at the moment)

Negative impact

Negative impact

A decrease of fishery resources is expected, at least in the short medium term

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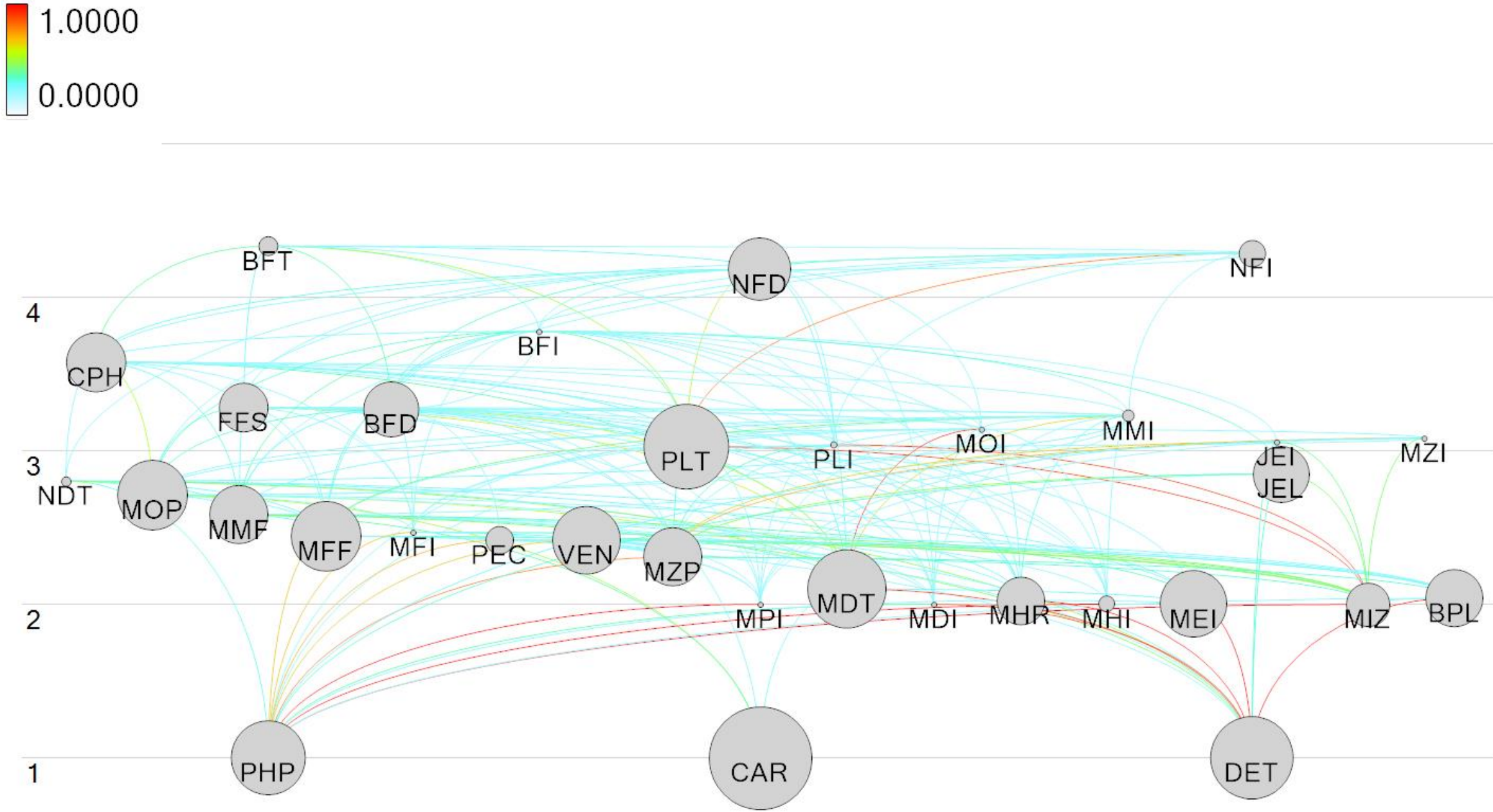
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MMF
MFF
MFI
PEC
VEN
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MHI
MEI
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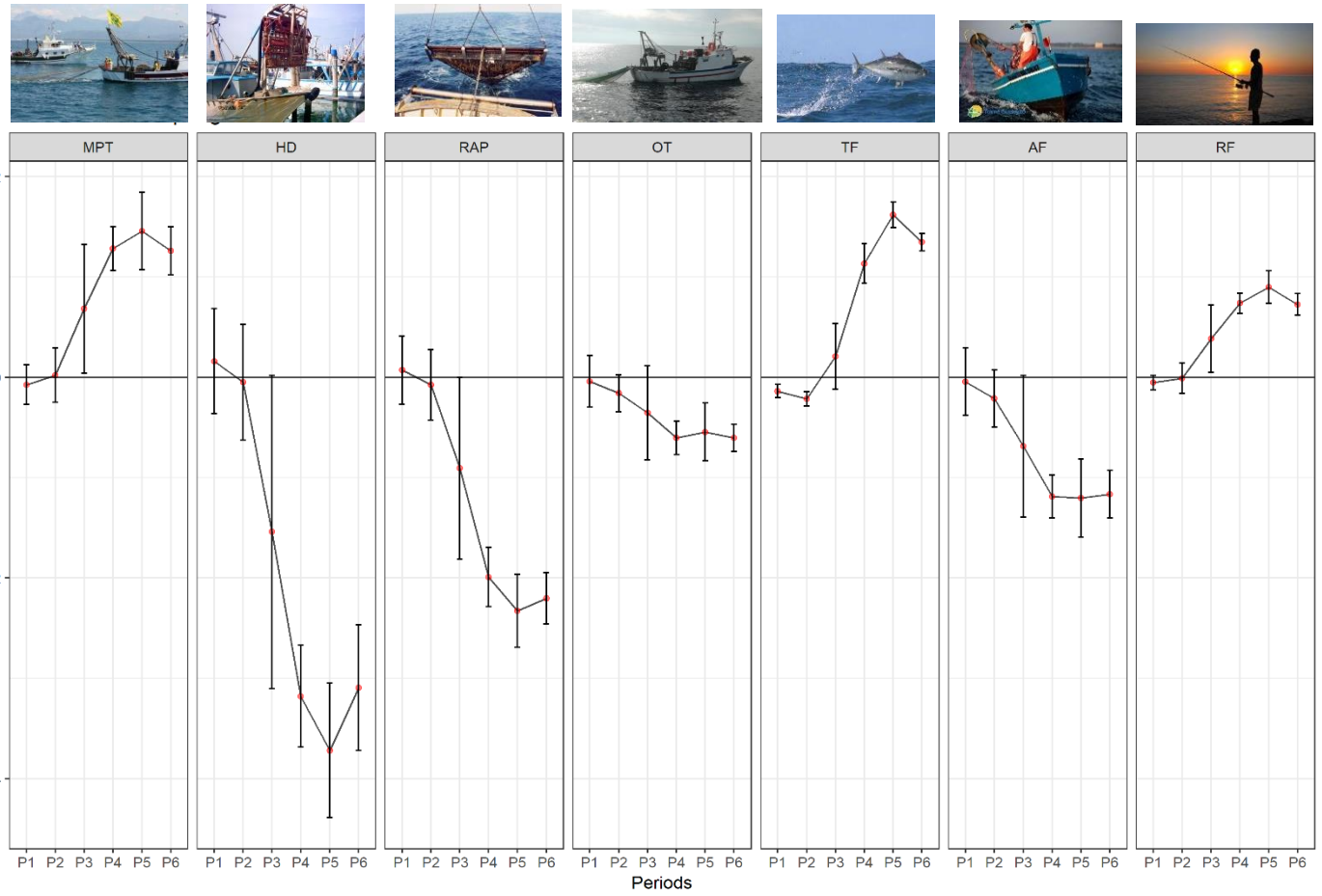
BPL
PHP
CAR
DET

Scenarios

(warming water)



landings

Pair mid-water trawling + 15%

Hydraulic dredge – 35%

Rapido -22%

Bottom trawling -6%

Tuna fishery +15%

Artisanal fishery -12%

Recreational fishery +9%

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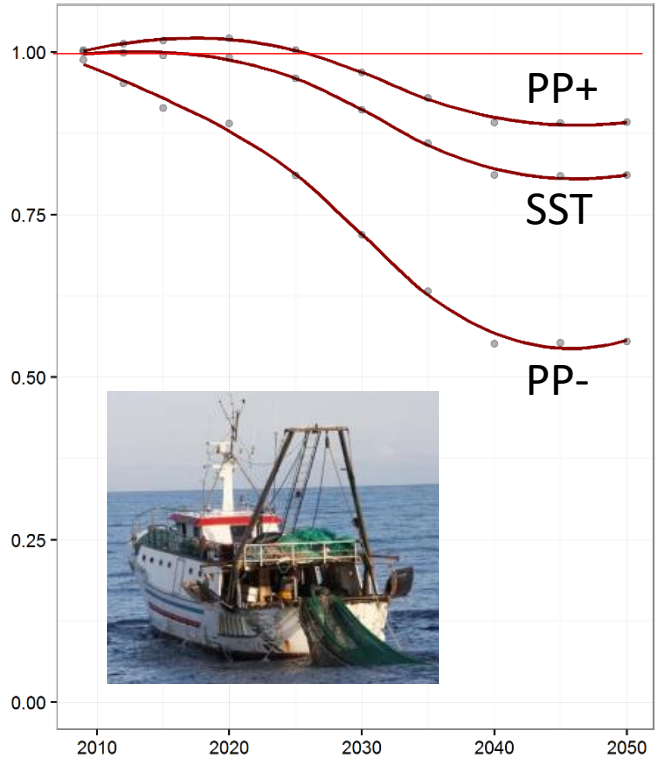
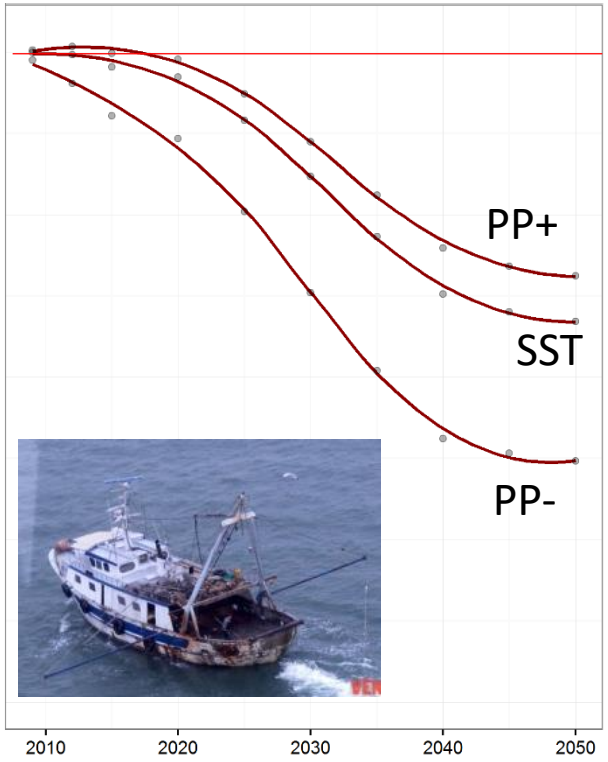
Scenarios

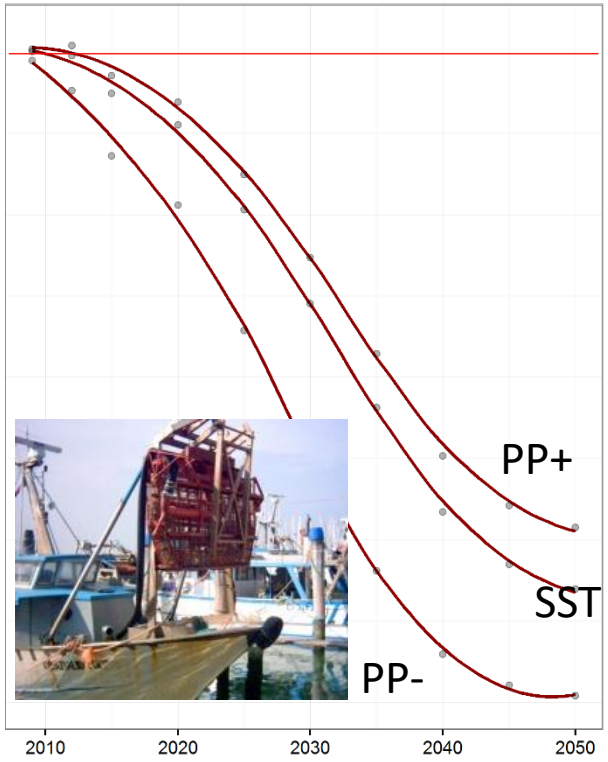
BOTTOM TRAWLING



RAPIDO



HYDRAULIC DREDGE



Economic effects

SST = *warming water*

PP+ = *warming water and PP increasing*

PP- = *warming water and PP decreasing*

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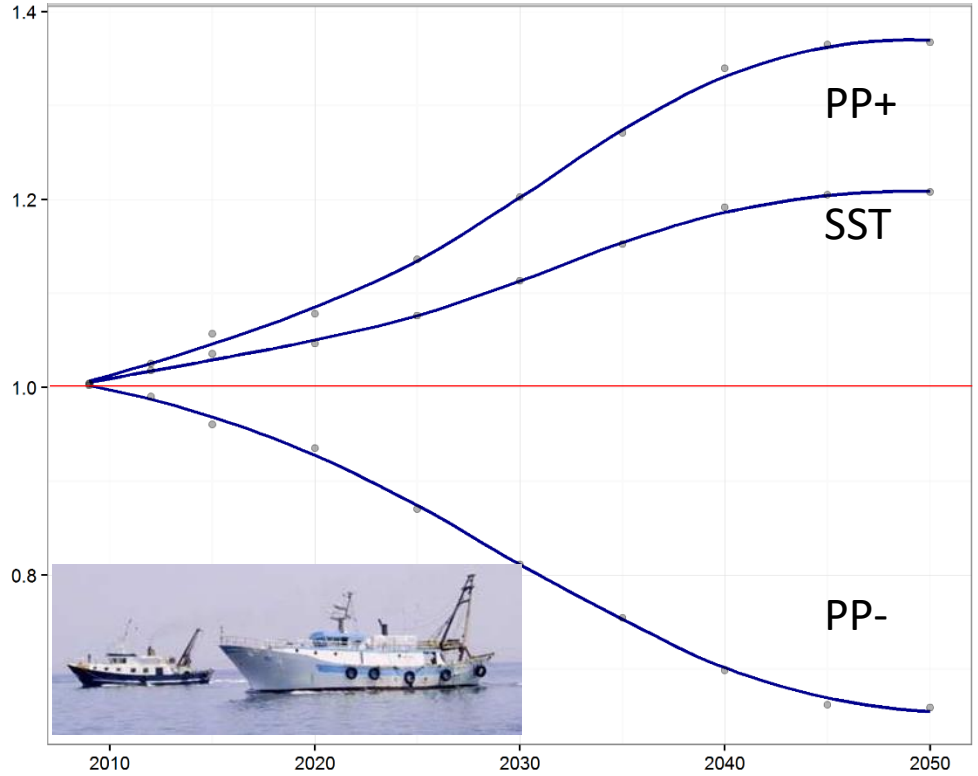
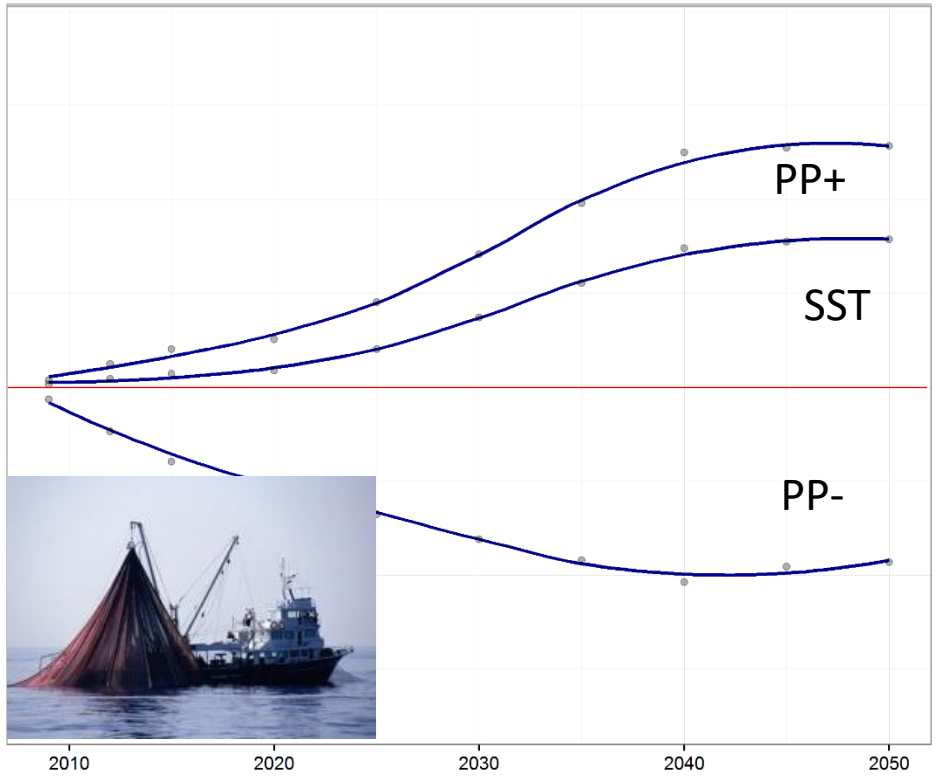
Scenarios

PAIR MID-WATER TRAWLING



TUNA FISHERY



Economic effects

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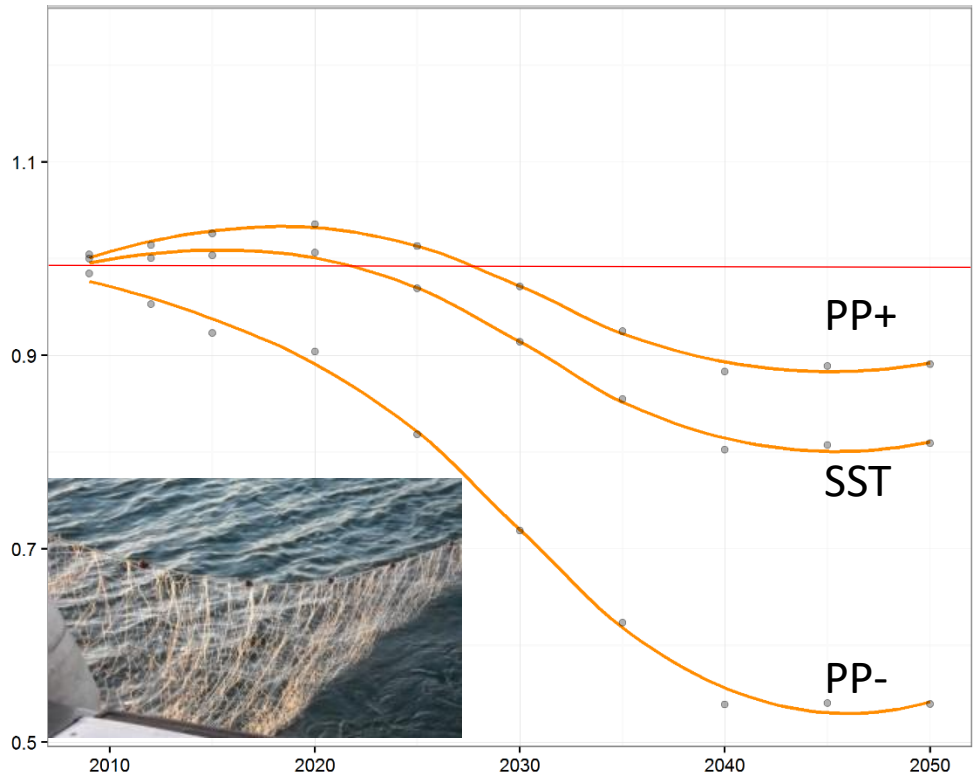
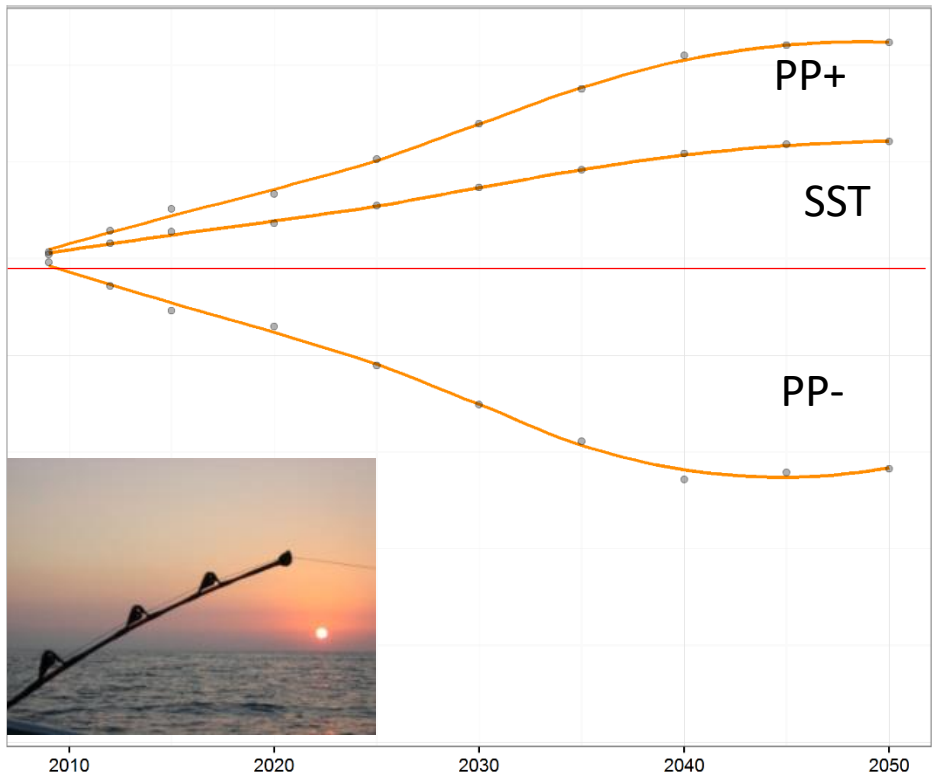
Scenarios

ARTISANAL FISHERY



RECREATIONAL FISHERY



Economic effects

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- presence of non linear effects
- general decreasing of total value
- differential effects on the basis of the fleet segment

    ones targeting pelagic species increasing value

    ones targeting demersal species decreasing value

    among the last, the artisanal fishery showed to be more resilient

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Take home messages

1. Decrease in-sustainability of fishing activities (product valorization)

2. Increase the resilience of coastal communities (activities diversification)

3. Promote collaboration instead of competion

4. Start to work on the Carbon footprint of the fishing fleets

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References

D1.3 **Empirical analysis of the historical effects of climate change on fisheries and aquaculture production**

D1.5 **ClimeFish case study characterization update for all cases**

D3.2 **Production-biomass and distribution scenarios for reference case studies**

D3.5 **Lessons learnt and future challenges on biological forecasting**

Libralato S., Caccin A., Pranovi F., 2015. Modelling species invasions using thermal and trophic niche dynamics under climate change. *Frontiers in Marine Science,* doi: 10.3389/fmars.2015.00029

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