## Session 5: Adapting to a changing climate

### SHOWCASING THE DECISION SUPPORT SOFTWARE

## Parallel sessions





### **Group splitting**

#### 11:45-12:30 Parallel sessions

The Decision Support Software - presentations and showcase of the tool

Marine Fisheries in	Marine aquaculture	Hungarian pond		
West of Scotland	in Greece	aquaculture		
Chair: M. Norte	<i>Chair: R. Chapela</i>	Chair: J. Arias Hansen		
Iran room	Lebanon room	Mexico room		
A. Baudron,	N. Papandroulakis,	G. Gyalog,		
Marine Scotland	HCMR, Greece	HAKI, Hungary		





## IRAN ROOM

- Mariola Norte, CETMAR
- Alan Baudron, Marine Scotland

## West of Scotland marine fisheries





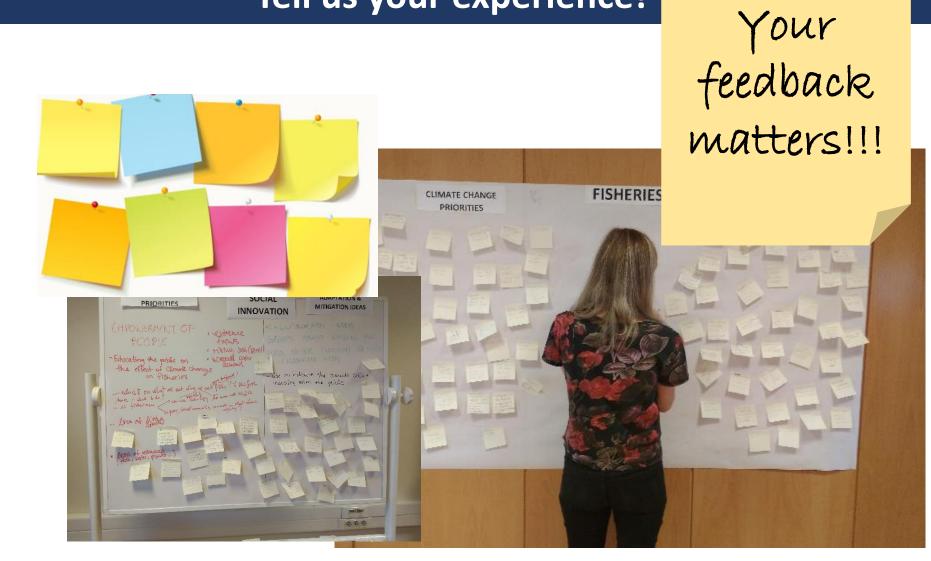
### Today's plan

- Presentation of the Decision Support Software for the Greek marine aquaculture (Nikos)
- Showcase of the tool Split into groups (1-2 groups)
- Share your feedback (stick your post-it on the flipchart)





### Tell us your experience!







### Any ideas on...

- How was your experience with the tool?
- Improvement ideas
- Application in further projects
- Any other thoughts?





## Thanks!









## A Decision Support Software for the West Scotland demersal fishery

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



Alan Baudron, Johanna Witt, Astrid Strum







## **ClimeFish: adapting to climate change** Model simulations Risk assessment **Empirical analyses** Cod 30000 Stakeholder input

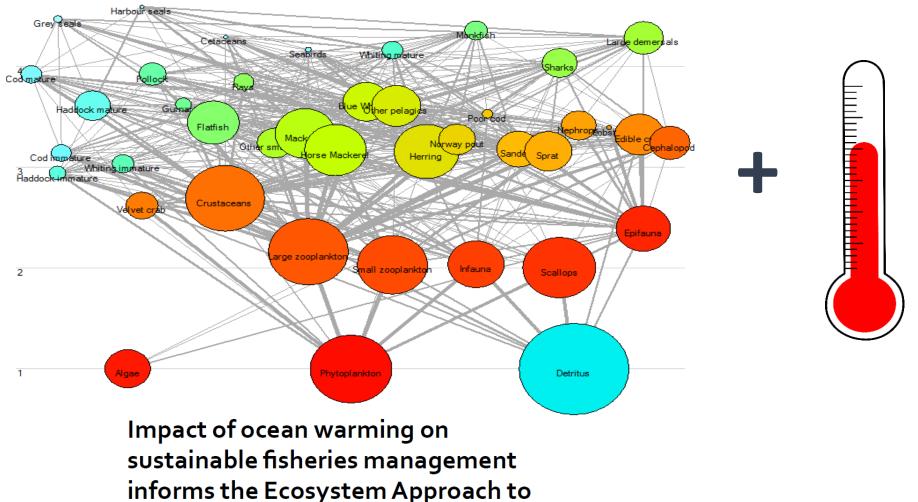
### **Decision Support Software**

Tools to help stakeholders make decision to mitigate the impact of climate change





## Modelling the future impact of climate change



#### Fisheries

N. Serpetti<sup>1</sup>, A. R. Baudron<sup>2</sup>, M. T. Burrows<sup>1</sup>, B. L. Payne<sup>1</sup>, P. Helaouët<sup>3</sup>, P. G. Fernandes<sup>2</sup> & J. J. Heymans<sup>1</sup>

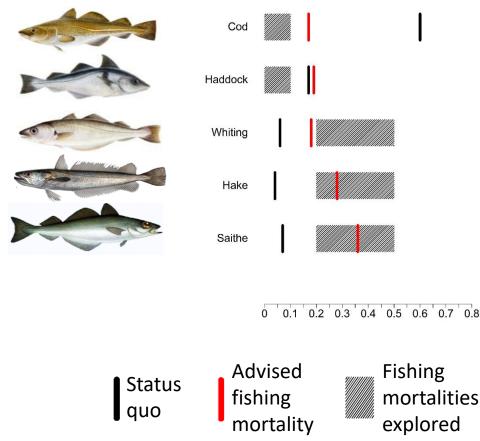
ClimeFish Serpetti et al., 2017



# Explore climate scenarios & alternative fishing regimes

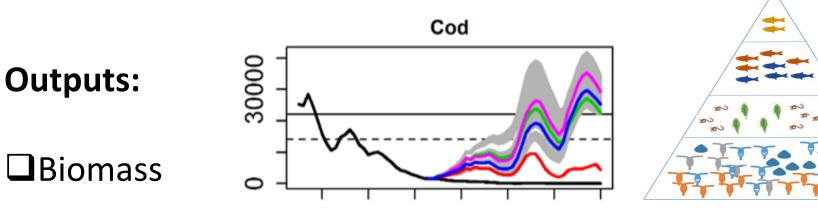
- Simulations from 2014 to 2050
- Two climate scenarios: medium & severe warming
- Two period with fixed
  fishing mortalities: 2014 to
  2030 & 2031 to 2050
- Model accounts for predator-prey interactions







# Explore climate scenarios & alternative fishing regimes



Landings

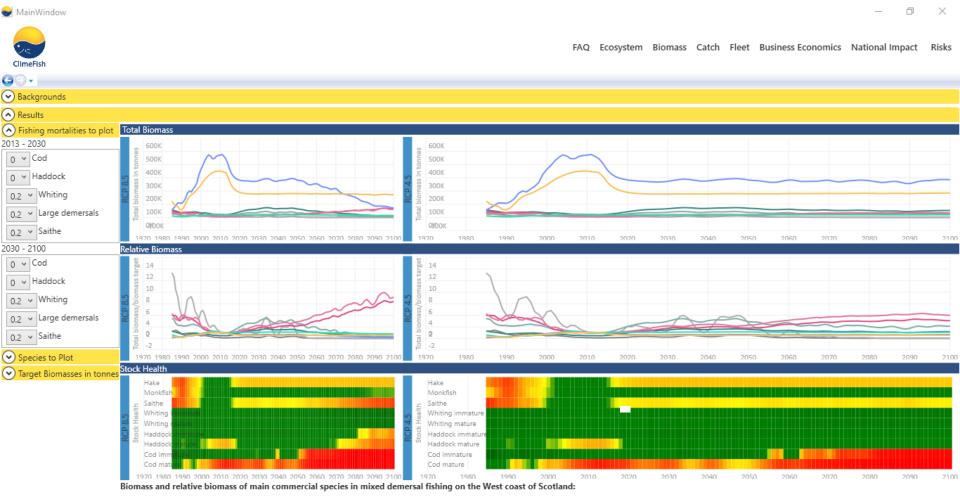
ClimeFish

Ecosystem indicators

Socio-economic indicators



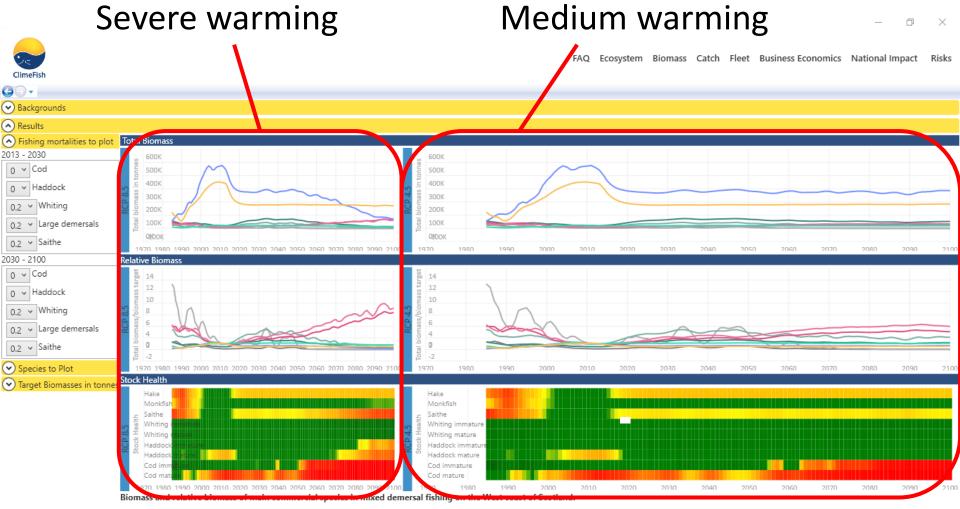




#### Conclusions



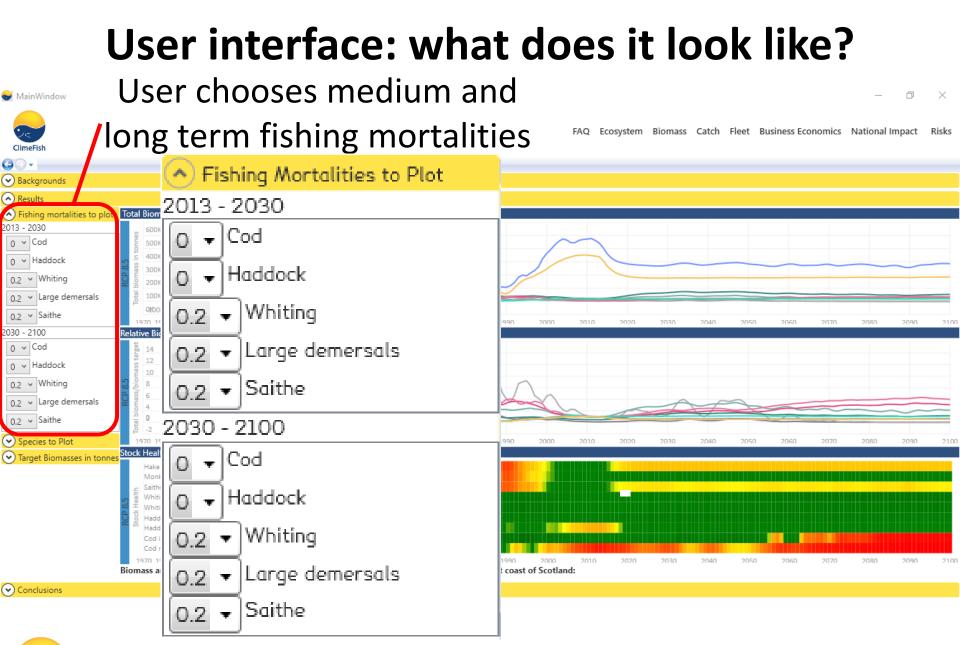




Conclusions







This project has received funding from the European Union's Horizon 2020 research and innovation action under grant agreement no. 677039



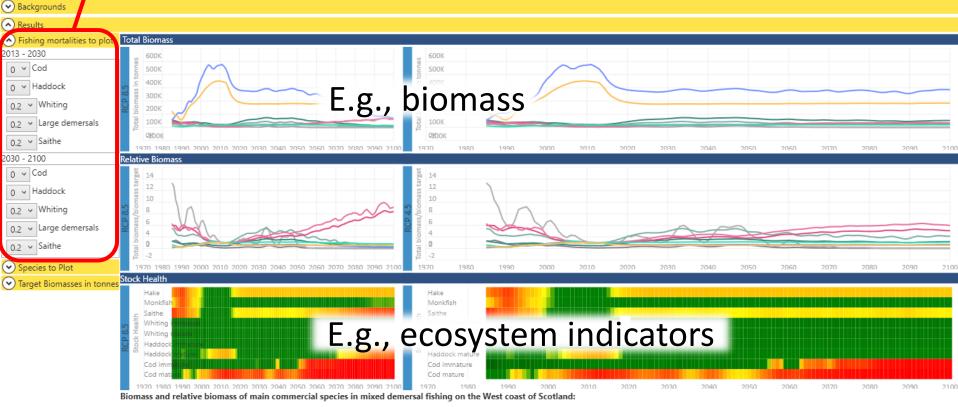
ClimeFish



曼 MainWindow



### User chooses medium and – • × /long term fishing mortalities

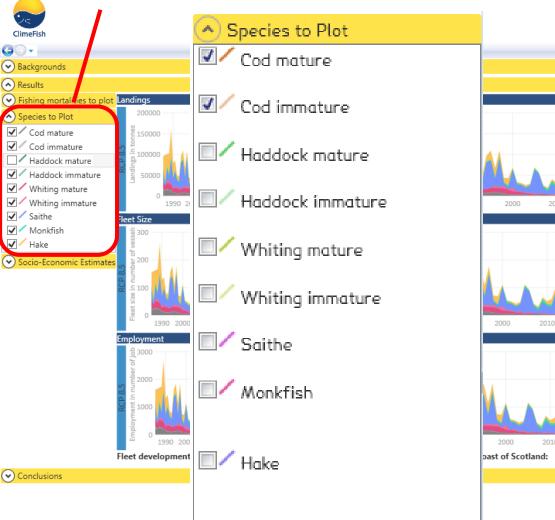


Conclusions





#### User chooses which species to plot



ClimeFish

MainWindow

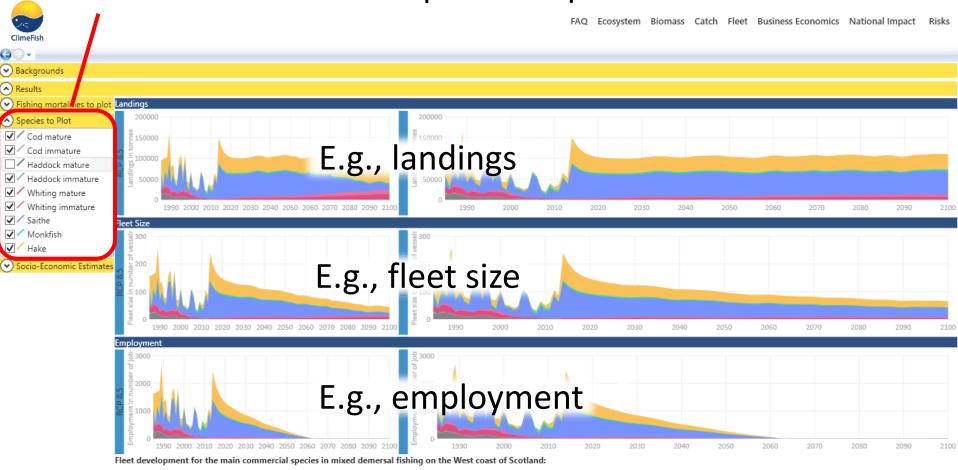
FAQ Ecosystem Biomass Catch Fleet Business Economics National Impact Risks

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User chooses which species to plot



#### Conclusions

曼 MainWindow





🚭 MainWindow

Fishing mortalities to plot

Landings

Fleet Size

1990

Employment

500

Fleet developn

1990

40000

10.4

0.02

0.27

0.21

0.29

95000

ClimeFish

**G**O-Backgrounds

Results

Species to Plot Cod mature

Saithe

Hake

10.4

0.02

0.27

0.21

0.29

Repair costs

Conclusions

95000

Monkfish

Cod immature ✓ ✓ Haddock mature

✓ Haddock immature Vhiting mature ✓ ✓ Whiting immature

Socio-Economic Estimates

Employment per vessel

Technical change, fleet

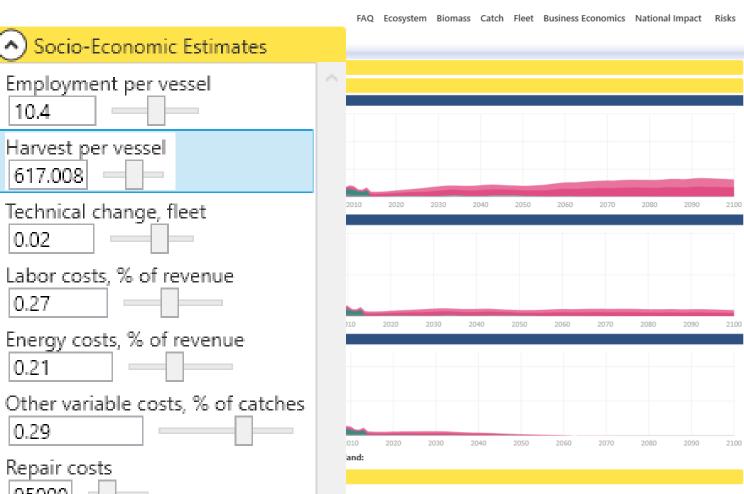
Labor costs, % of revenue

Energy costs, % of revenue

Other variable costs, % of catches

Harvest per vessel 617.008

#### User can adjust socio-economics





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### Have a look for yourself!

•	MainWindow										
	ClimeFish	FAQ	Ecosystem	Biomass	Catch	Fleet	Business Economics	Employment	GVA	Risks	
G											

## ClimeFish West Coast of Scotland

Welcome to the ClimeFish decission support software for mixed-demersal fisheries on the West coast of Scottland. Please navigate the documentation for different parts of the project with the buttons on the upper right.



This project was co-funded by the European Union under Horizon 2020 - Blue Growth.



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