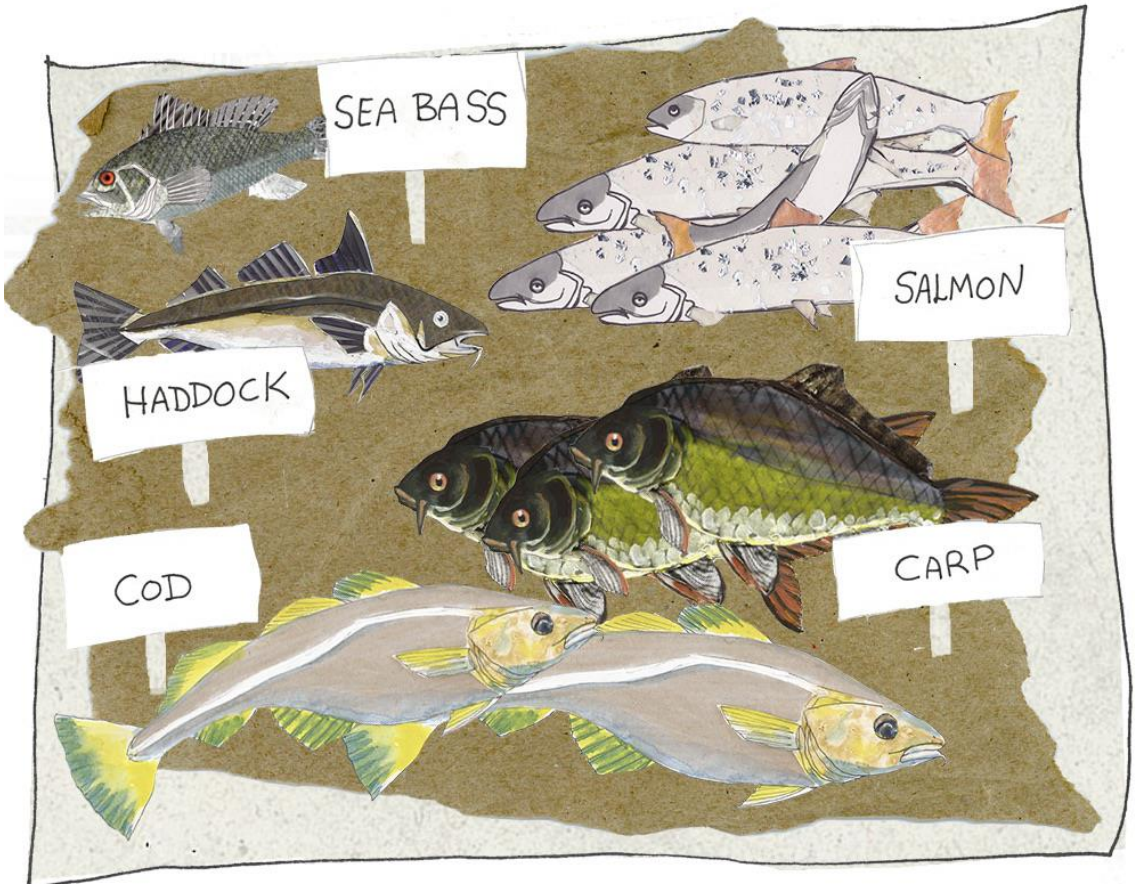
SESSION 2 – Potential impacts of climate change on seafood production



ClimeFish

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

Forecasting methodology in ClimeFish case studies

X. Anton Álvarez-Salgado
CSIC – Institute of Marine Research

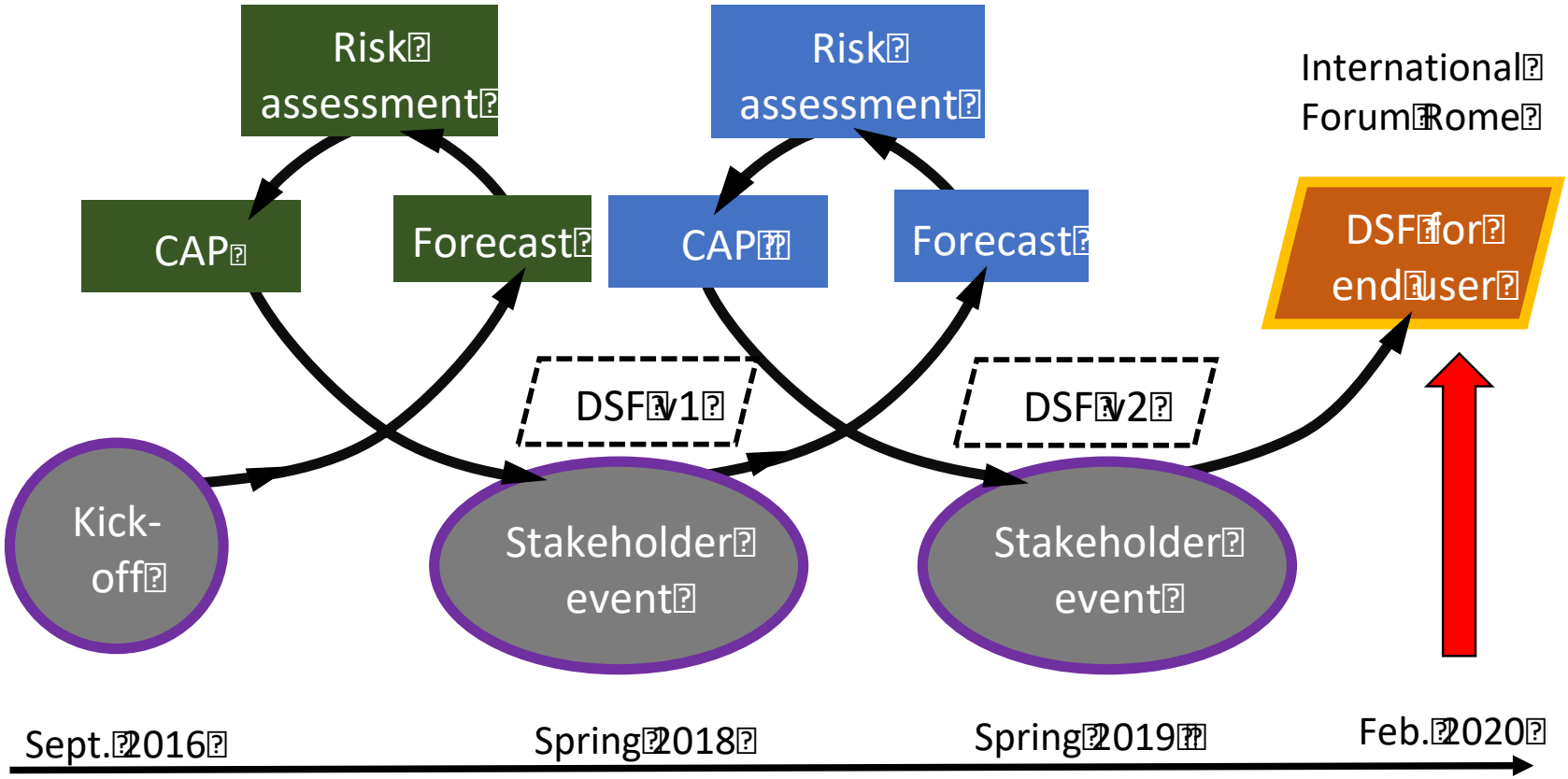
2020 International Forum on the Effects of Climate Change on Fisheries & Aquaculture
25-26 February 2020, Rome

ClimeFish

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

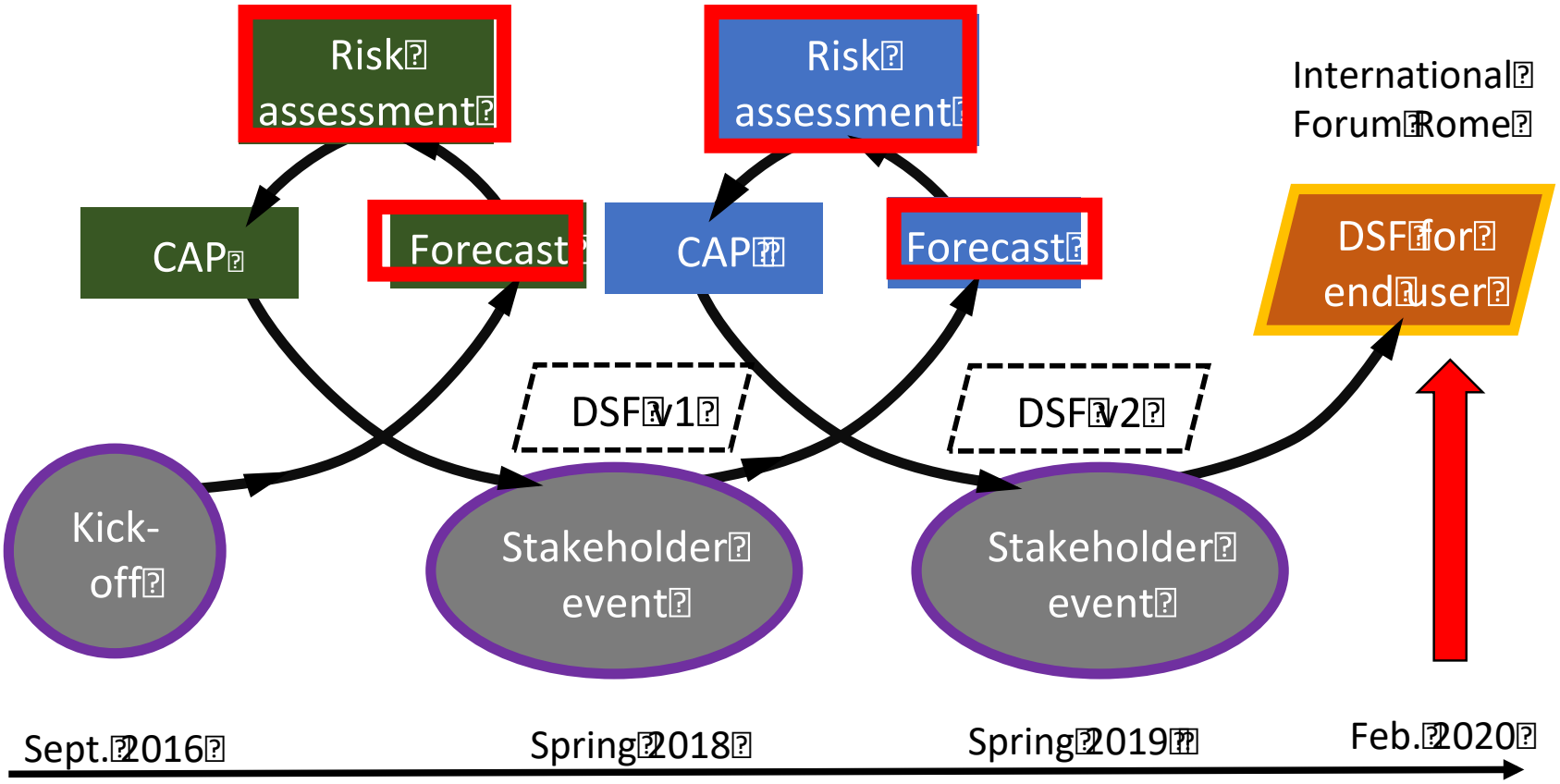
ClimeFish approach

Co-creating a DSF to ensure sustainability of fish production



ClimeFish

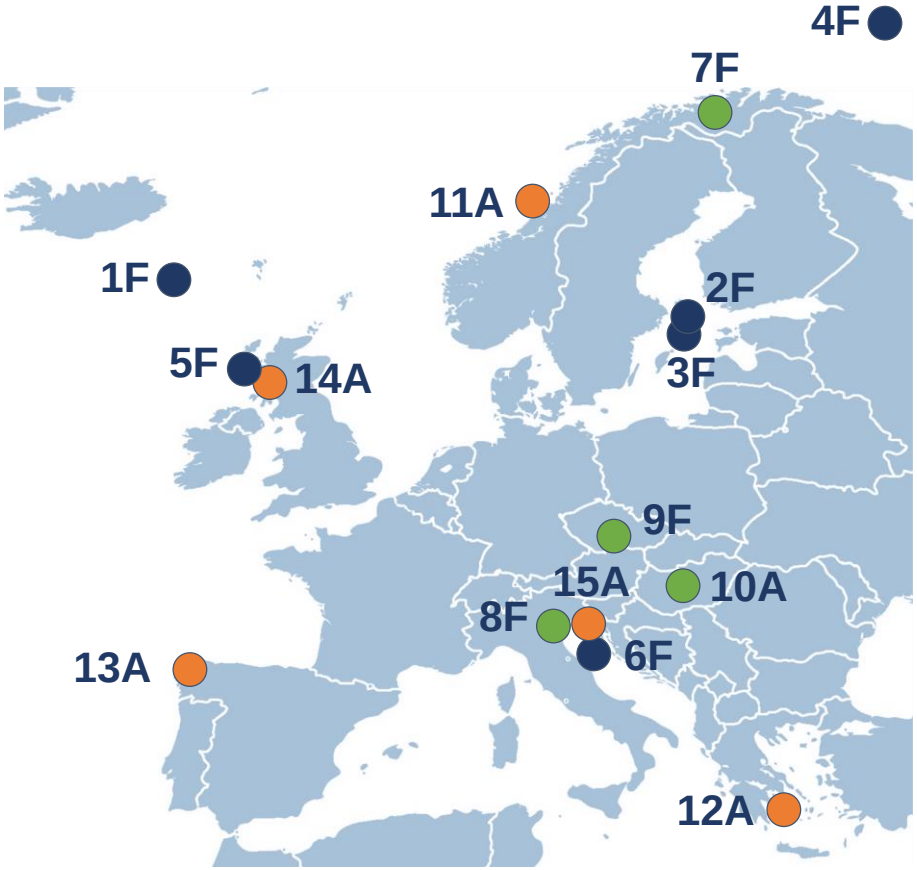
This project has received funding from the European Union´s Horizon 2020 research and innovation action under grant agreement no. 677039



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

ClimeFish case studies

3 sectors including 15 case studies and 28 target species

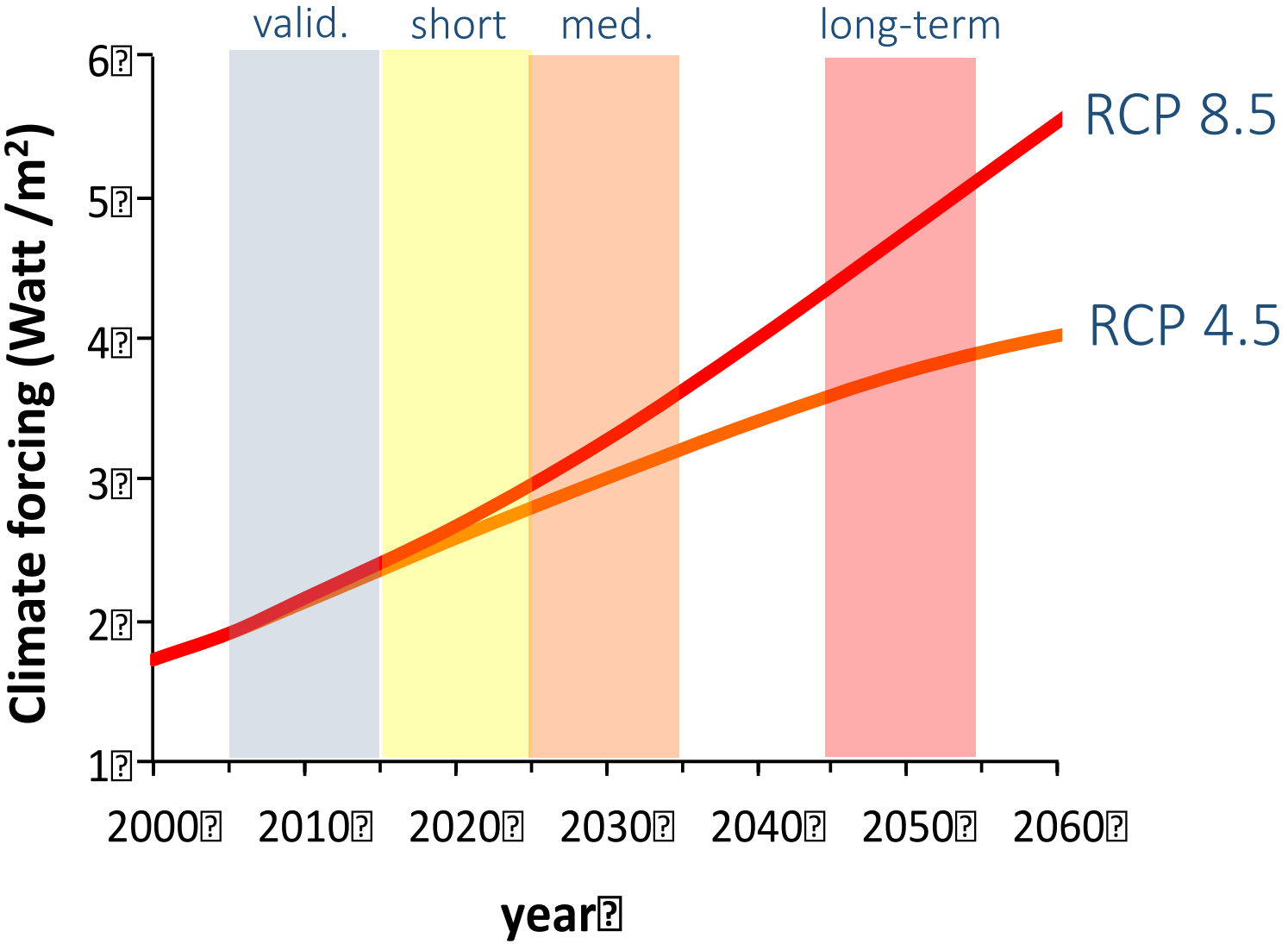


- Marine fisheries
- Marine aquaculture
- Freshwater lakes & ponds

ClimeFish

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

ClimeFish climate scenarios

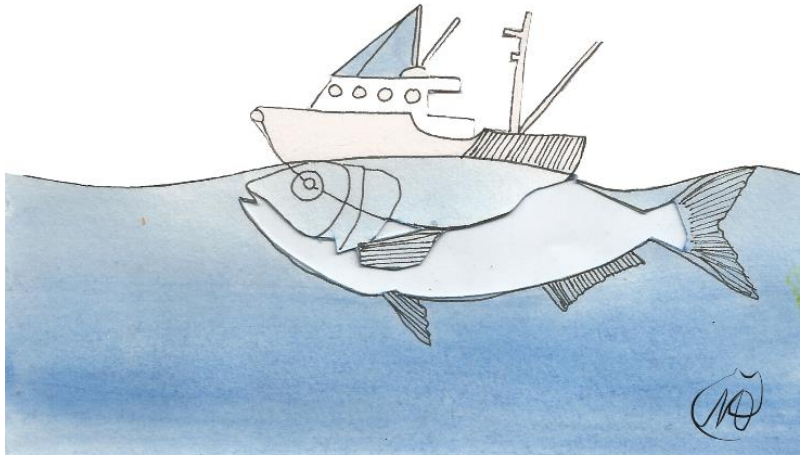


ClimeFish

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

ClimeFish climate models

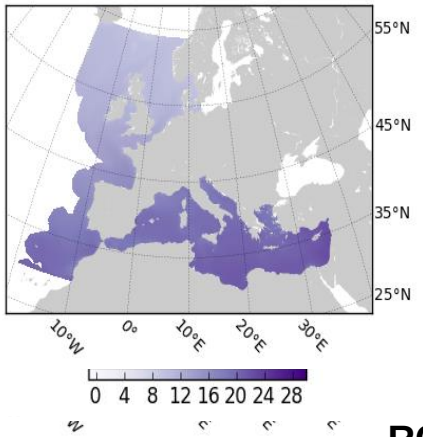
Balancing between a common RCM and the RCM that better reproduces the climate conditions of each particular region



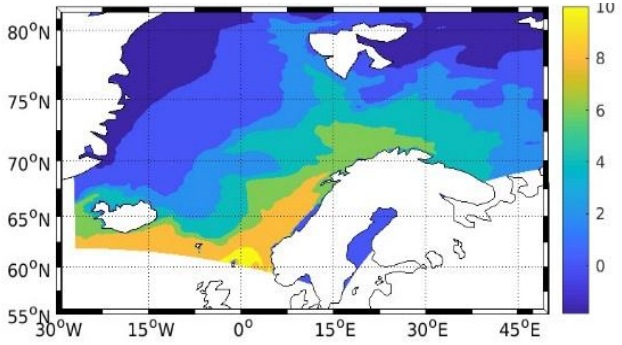
This project has received funding from the European Union´s Horizon 2020 research and innovation action under grant agreement no. 677039

Projected temperature of ClimeFish and CERES models in the open ocean (fisheries)

average 2000s-2009s

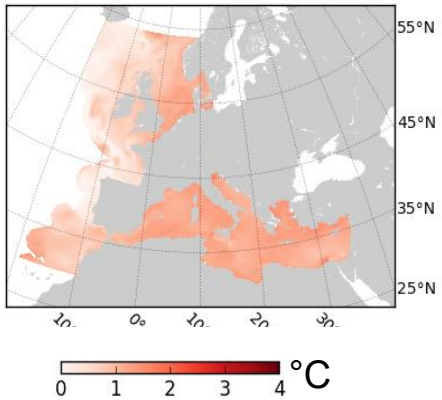


average 2010-2020

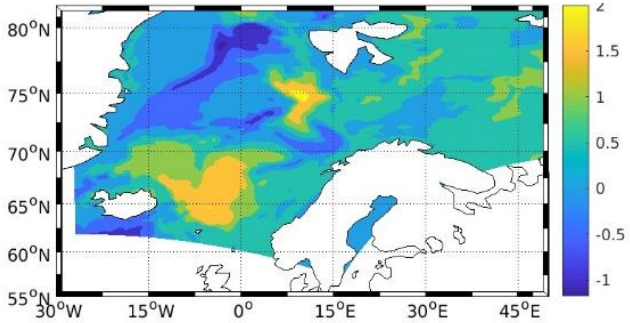


RCP 8.5

difference 2050s-2010s



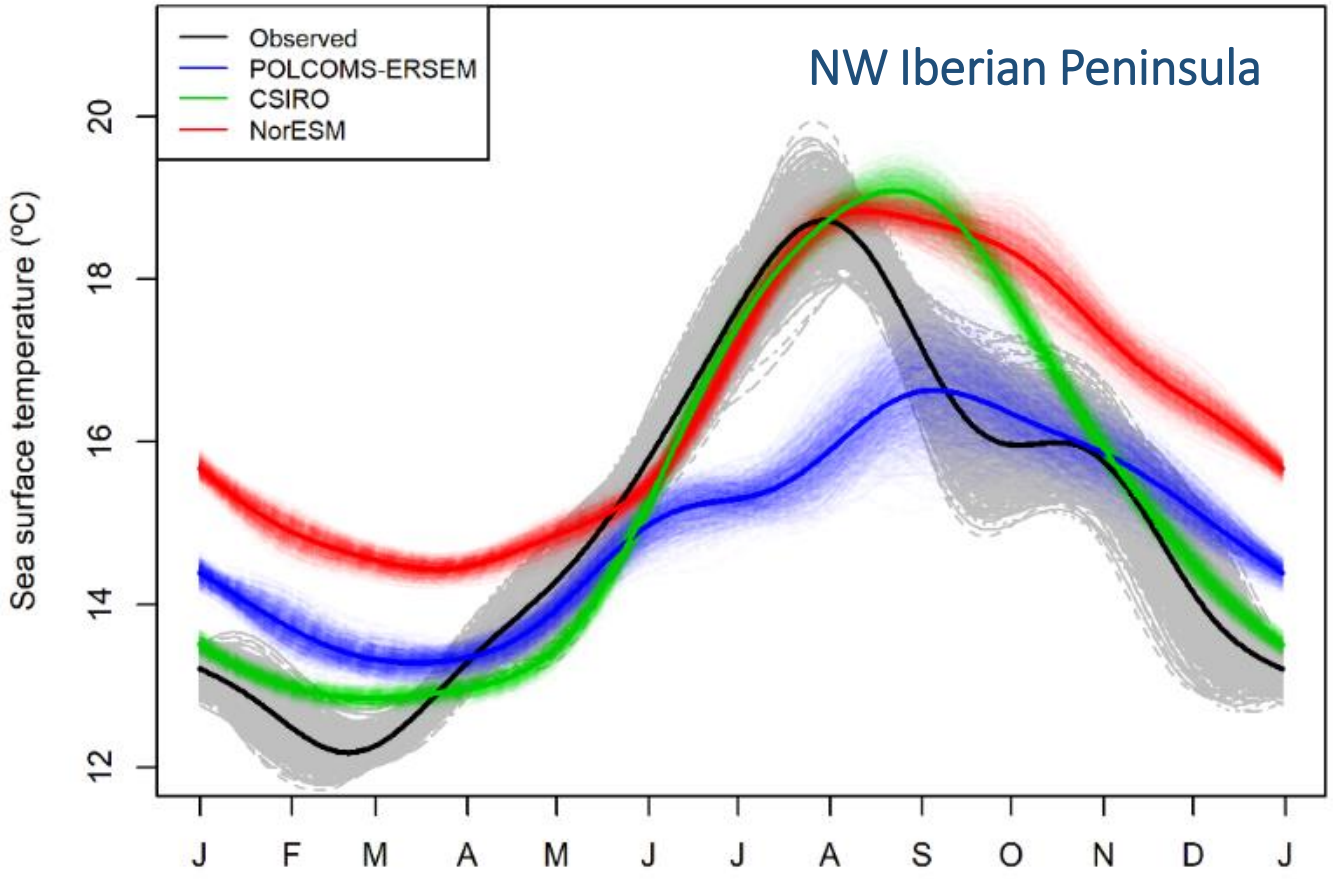
difference 2050s-2010s



ClimeFish

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

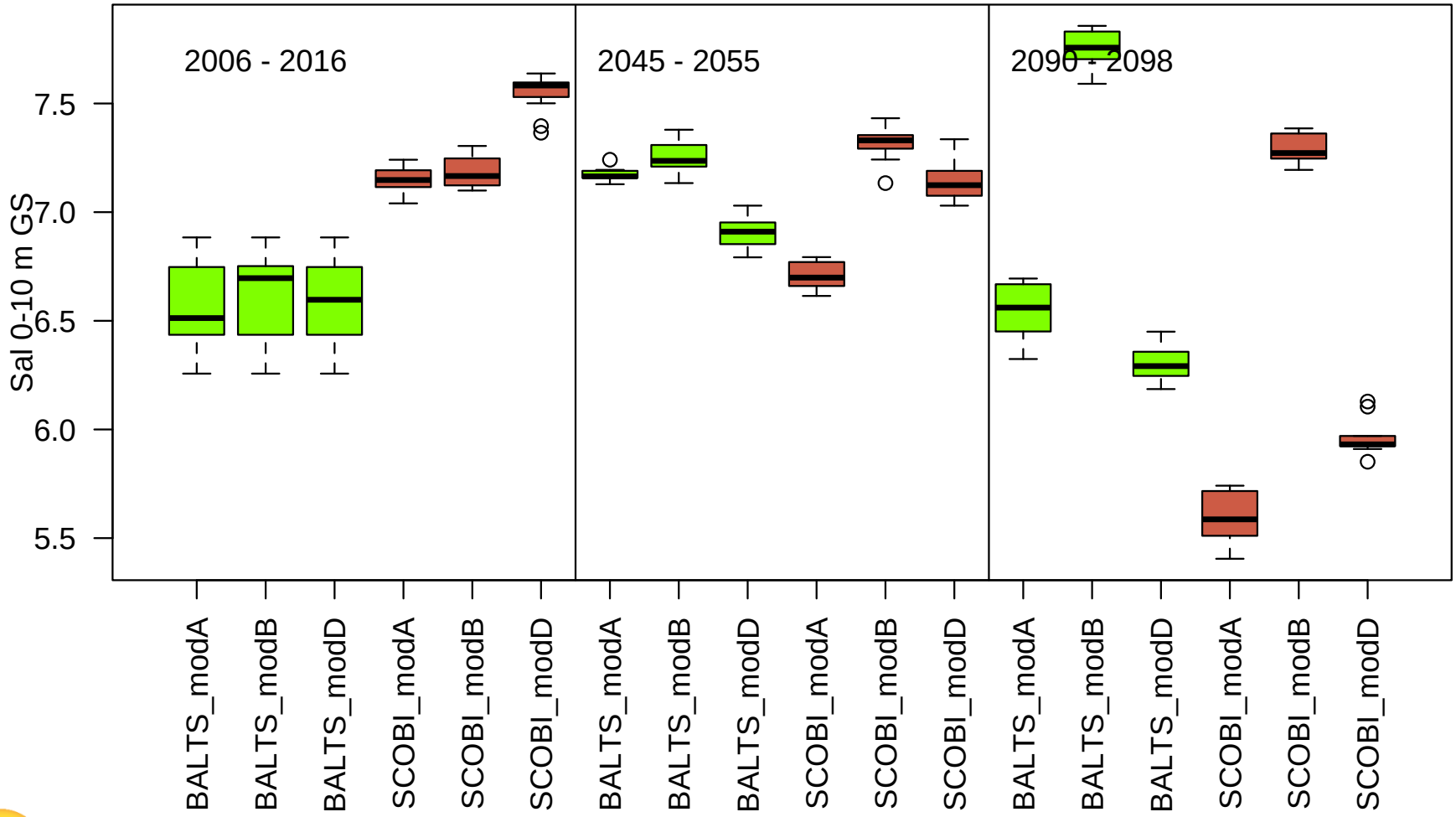
Projected temperature of ClimeFish and CERES models in the coastal zone (aquaculture)



ClimeFish

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

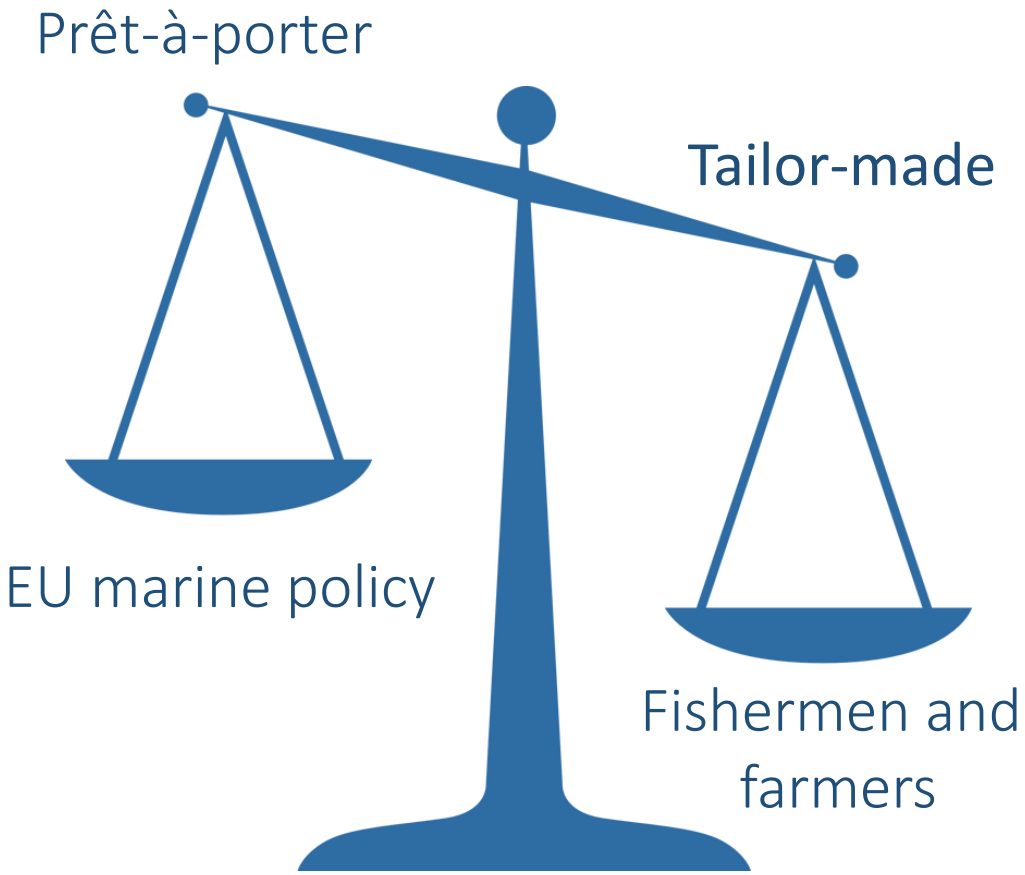
Projected temperatures and salinities in the Baltic sea are strongly dependent on the RCM used



ClimeFish

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

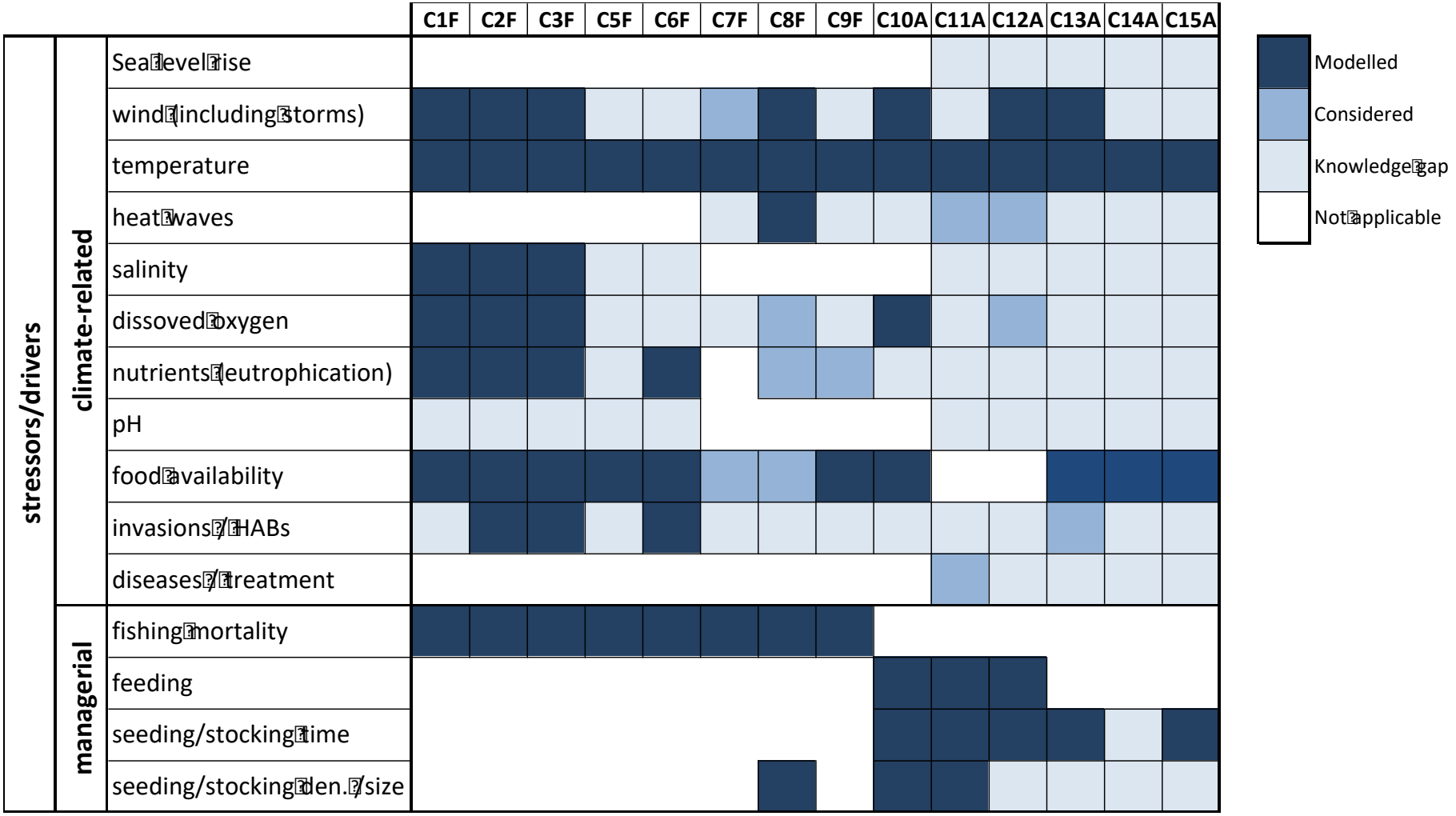
Balancing between adequacy at the case study level and generalization at the project level



ClimeFish

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

ClimeFish biological/ecological models



ClimeFish

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

Climate risks and opportunity assessment

in co-creation with stakeholders

Impact

Stakeholder input
- level and severity

Likelihood

Scientific knowledge and literature

Risk/Opportunity Level

Risk Matrix

Impact	Likelihood: Unlikely	Likelihood: Possible	Likelihood: Likely
Negligible (0)	No	No	No
Minor (1)	Minor	Moderate	Moderate
Moderate (2)	Moderate	Major	Major
Major (3)	Moderate	Major	Severe
Extreme (4)	Major	Severe	Severe

Opportunity Matrix

Impact	Likelihood: Unlikely	Likelihood: Possible	Likelihood: Likely
Negligible (0)	No	No	No
Minor (1)	Minor	Moderate	Moderate
Moderate (2)	Moderate	Major	Major
Major (3)	Moderate	Major	Transformative
Extreme (4)	Major	Transformative	Transformative

ClimeFish

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

A few points to remember

about forecasting in ClimeFish

Case-study oriented rather than European level oriented

In co-creation with stakeholders

There are as many futures as climate models used

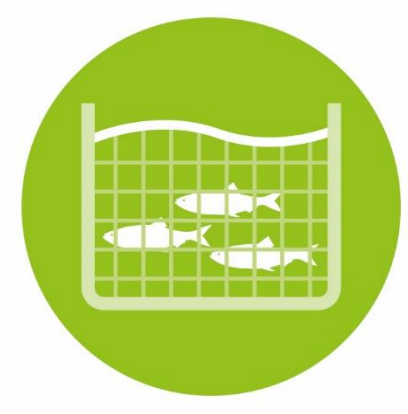
Climate and biological forecasting drives the risks and opportunities assessment

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

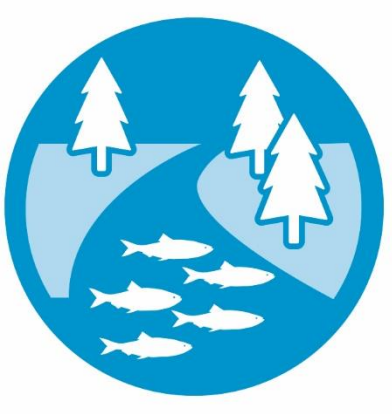
Time for ClimeFish and FAO case studies

Select the sector of interest!

Marine fisheries



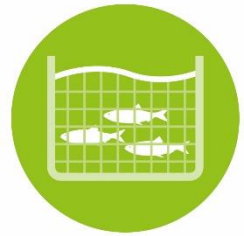
Marine aquaculture



Freshwater lakes & ponds

ClimeFish

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



Marine Fisheries Iran room	Aquaculture Lebanon room	Lakes & Ponds Mexico room
Adriatic Sea *F. Pranovi*	Scottish shellfish *B. Adams (tbc)*	North Norwegian lakes *R. Primicerio (tbc)*
Barents Sea *M. Fossheim*	Italian shellfish *F. Pranovi (tbc)*	Czech lakes *J. Kuběcka*
Baltic Sea *B. Müller-Karulis*	Galician shellfish *A. Salgado*	Italian Lake Garda *F. Pranovi (tbc)*
NE Atlantic *S. Hjøllo*	NE Atlantic salmon *E. Ytteborg*	Hungarian Pond Aquaculture *G. Gyalog*
West of Scotland *A. Baudron*	Greek fish *N. Papandroulakis*	Myanmar (FAO) *J. Parajua*
Eastern Caribbean (FAO) *I. Monnereau*	Chile (FAO) *L. Naranjo*	Malawi (FAO) *H. Sungani*
Mediterranean (FAO) *T. Fortibuoni*		

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