

Come onboard!



Presenting SEAWise at NWWAC

SEAWise has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101000318



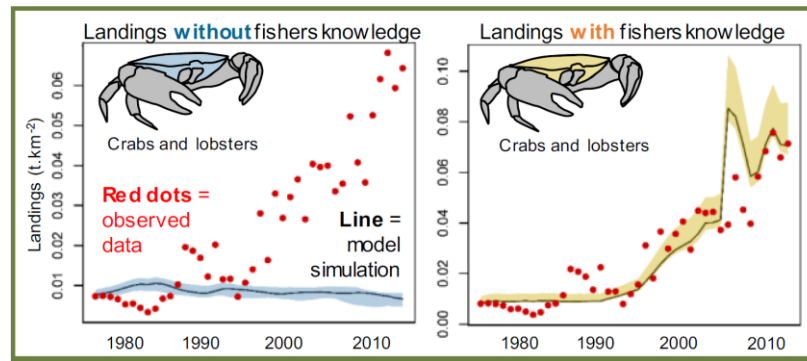
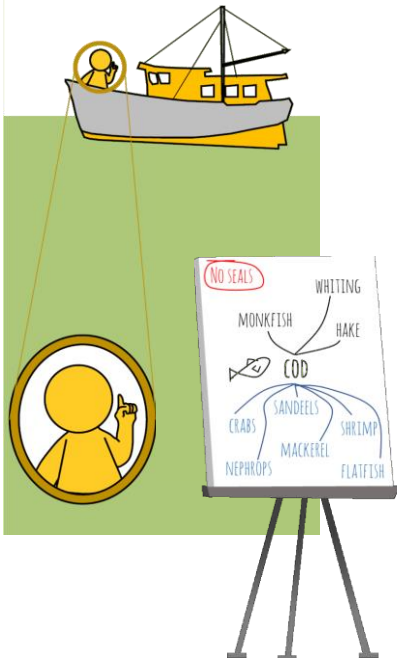
# lessons learnt in WKIrish

## Engage early and often

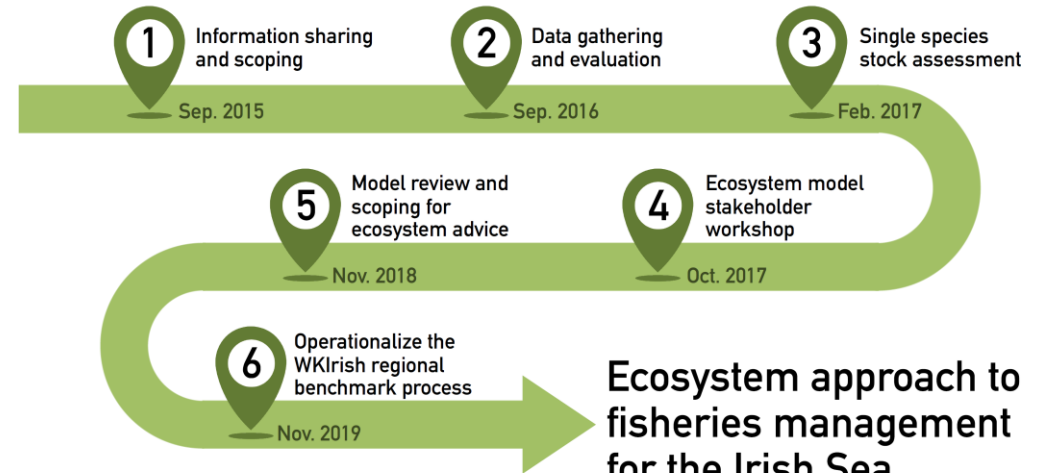


Dedicated collaboration between researchers, policy advisors, and stakeholders is needed early and often.

### Fishers' knowledge



### WKIrish roadmap



**Ecosystem approach to fisheries management for the Irish Sea**

# lessons learnt in WKIrish

## Align objectives and policy

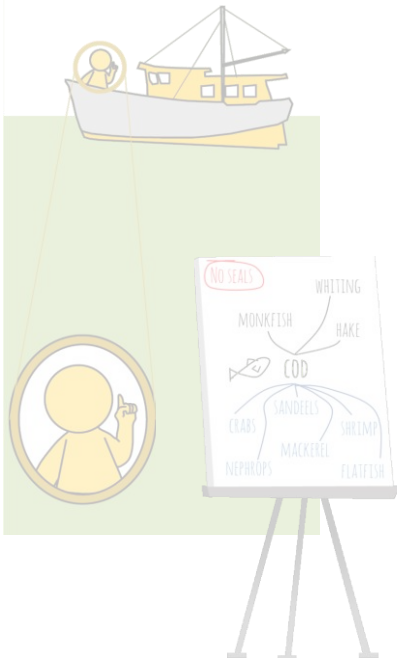


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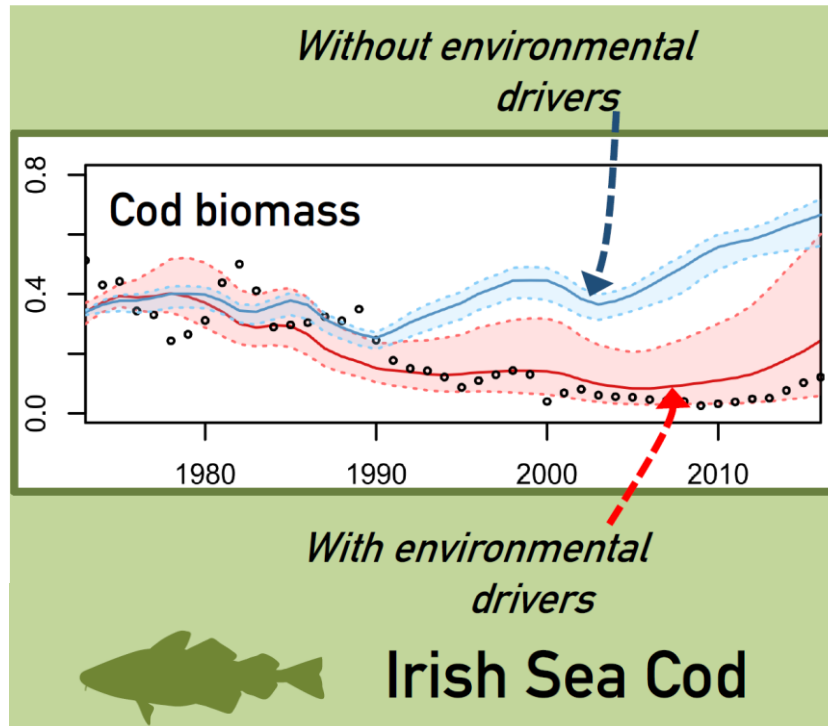


Research objectives and outputs need to be in alignment with policy questions and frameworks.

### Fishers' knowledge



### Ecosystem puzzle



### WKIrish roadmap



Bentley et al 2021

NWWAC WKIrish webinar 29th April 2021

# Jump with us from the next EBFM cliff . . .



⇒ *let us inspire each other  
again and more . . .*

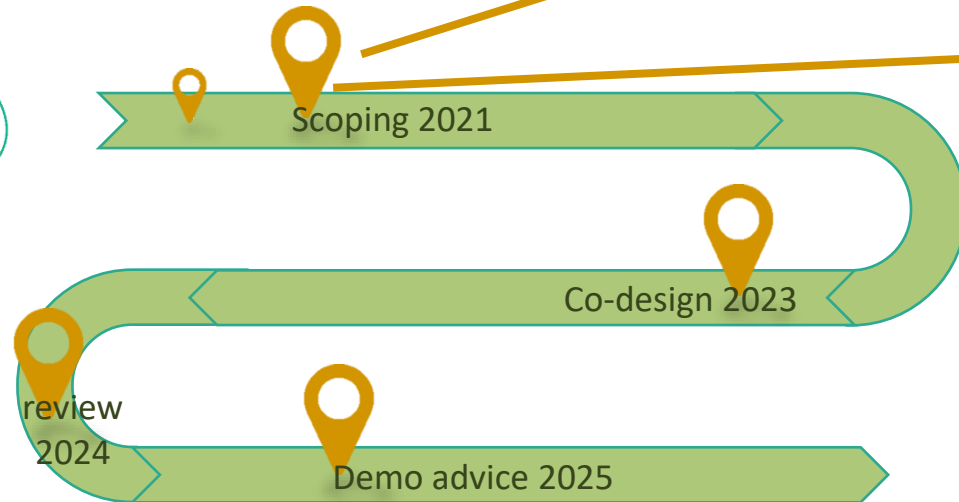


# Jump with us from the next EBFM cliff . . .

**Enhance benefits to fisheries  
while minimizing adverse  
ecosystem effects**

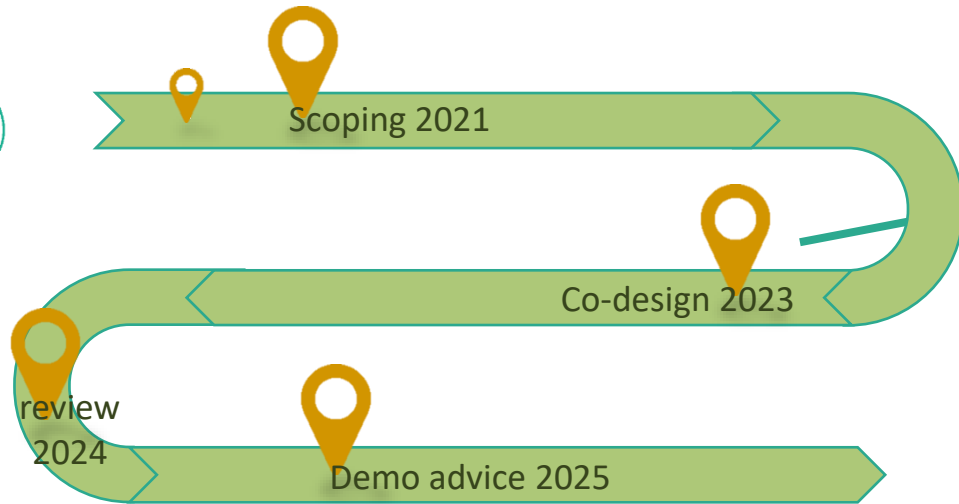
1. WW **Priorities?**
2. **Knowledge gaps?**

**YOUR INPUT**



⇒ *let us inspire each other  
again and more . . .*

# Jump with us from the next EBFM cliff . . .



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**Enhance benefits to fisheries while minimizing adverse ecosystem effects**

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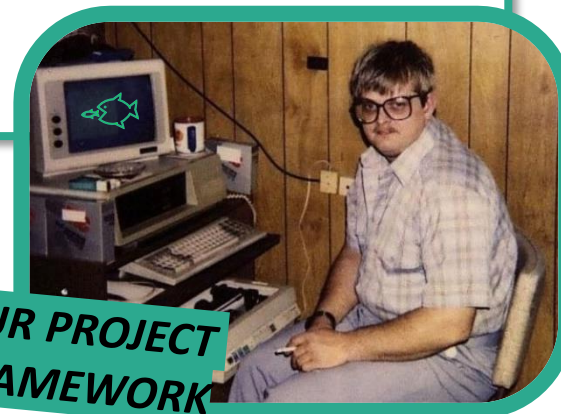
**YOUR INPUT**



3. Operational tool for accurate **predictions**
4. End-user driven **advice**



**OUR PROJECT FRAMEWORK**





# Seas? Gears? Species?

## ✓ **NWWAC**

- ◆ Irish Sea + Celtic Sea
- ◆ Otter and beam trawlers
- ◆ Small and large-scale fisheries
- ◆ Mostly mixed demersal fish: *Nephrops*, sole hake, haddock, cod, whiting, anglerfish, seabass, megrim...

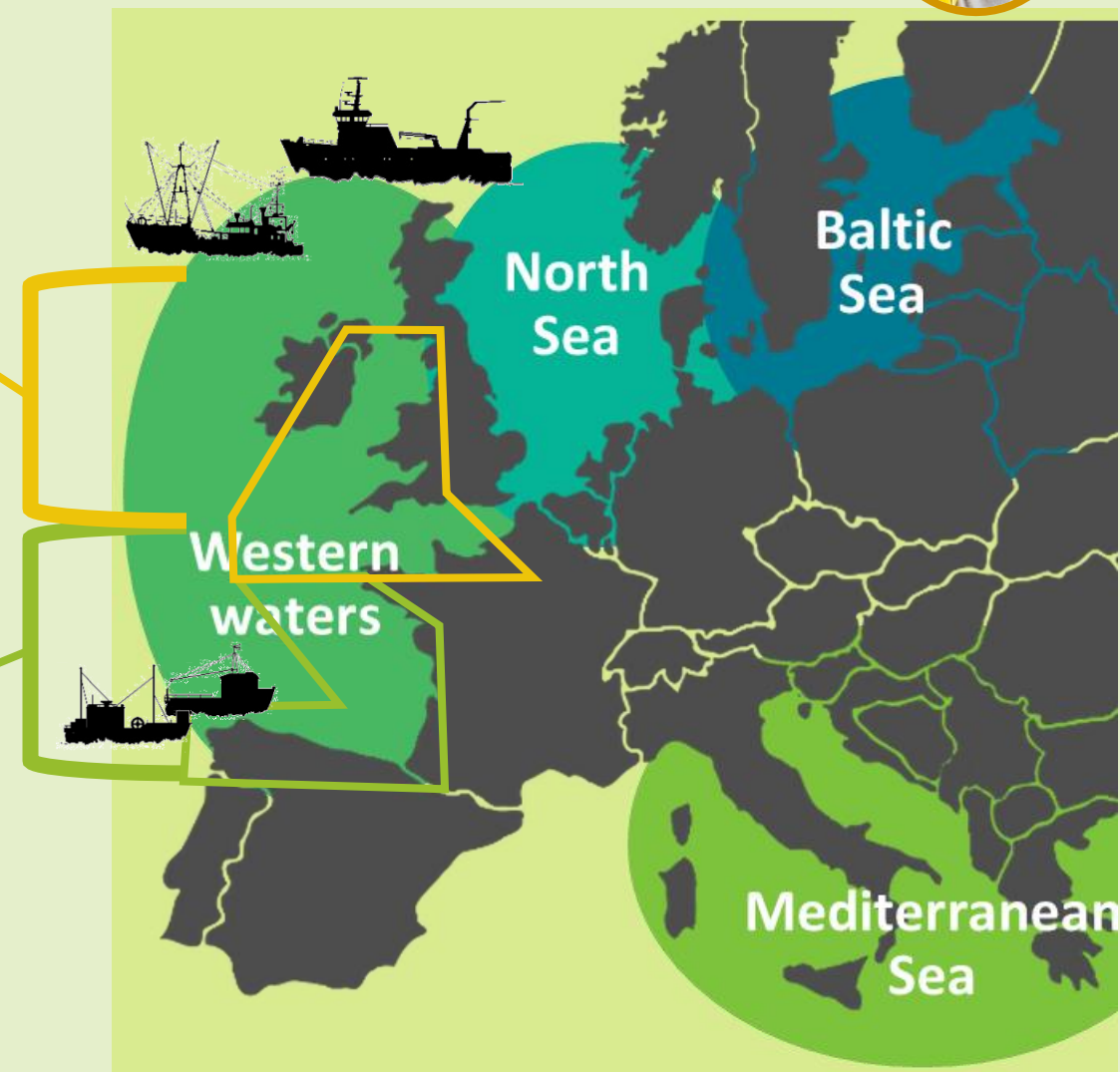


## ✓ **SWWAC**

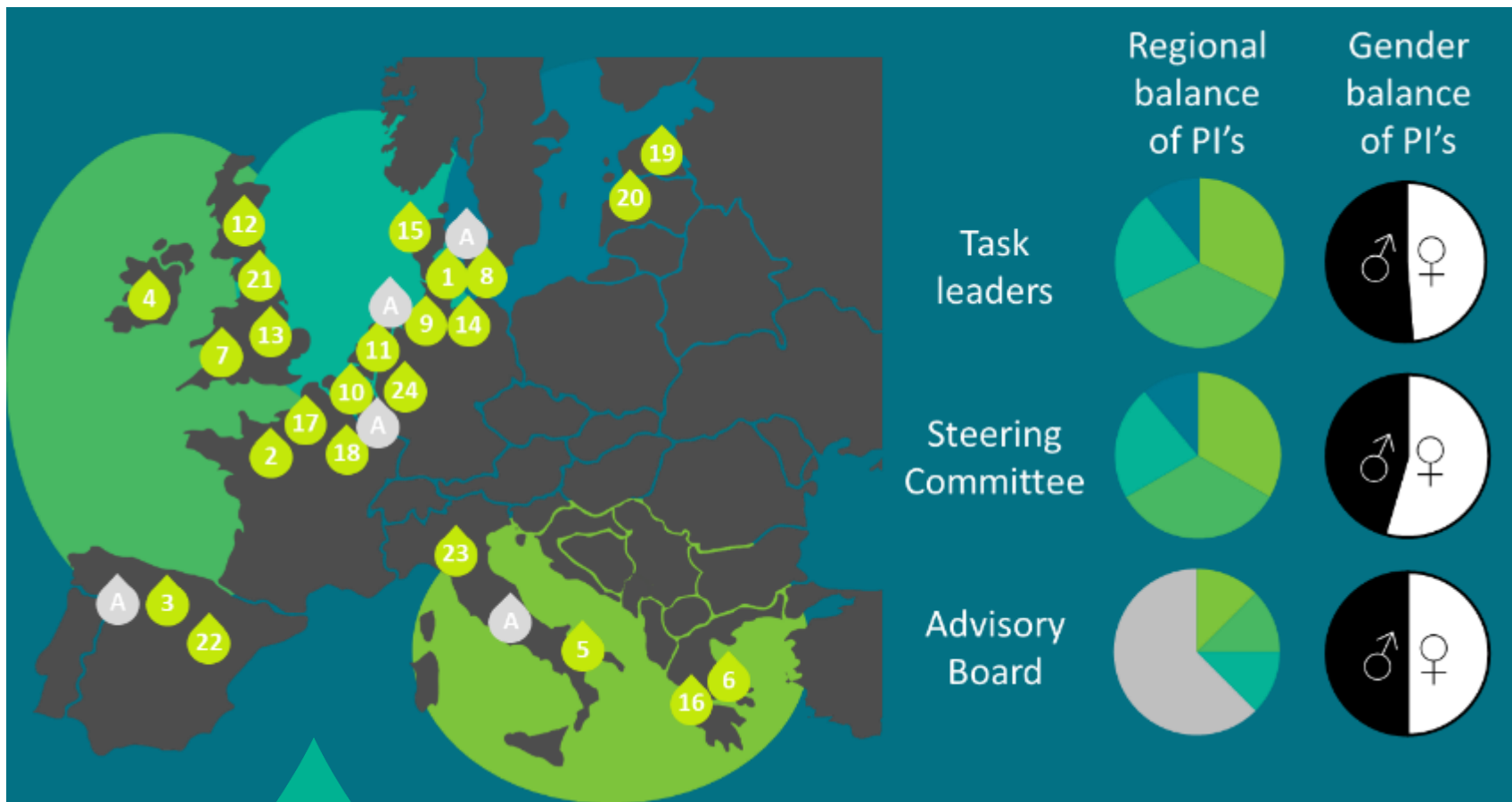
- ◆ Bay of Biscay + Iberian coast
- ◆ Longline, gill nets, purse seiners, trawlers
- ◆ Small-scale and large fisheries
- ◆ Seabass, hake, sole, anchovy, sardines...



## ✓ **PELAC**



# 24 partners. 8 mio €. 4 regions. 1 advisory board. 1 approach.



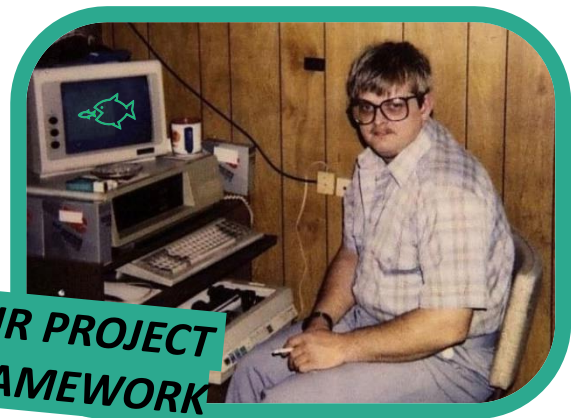
24 European partners and an Advisory Board with key experts

## Full Partners

DTU Aqua (coordinator), Ifremer, AZTI, MI, COISPA, HCMR, Mindfullywired (MWC), ICES, Ti, ILVO, WMR/WEcR, SMRU, Cefas, CAU, CBG-AAU, ATHENA, UBO, Agrocampus, University of Tartu, BIOR, University of Strathclyde, CEPESCA, Politecnico di Milano, WUR

## Advisory Board

Ernesto Penas-Lado, Mark Dickey Collas, Elisabetta (Bee) Morello, Javier Garat, Martin Pastoors, Antonia Leroy, Magaret (Peg) Brady, Athanassios Tsikliras, Eva Plaganyi





# SEAWISE framework

WP2: fisheries as social-ecological system



WP3: ecosystem change ON fish & health



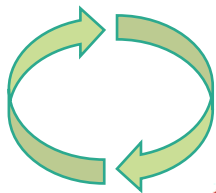
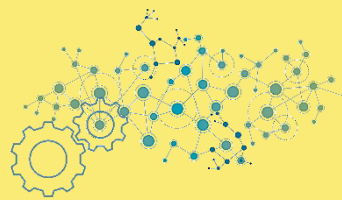
WP4: adverse effects OF fishing



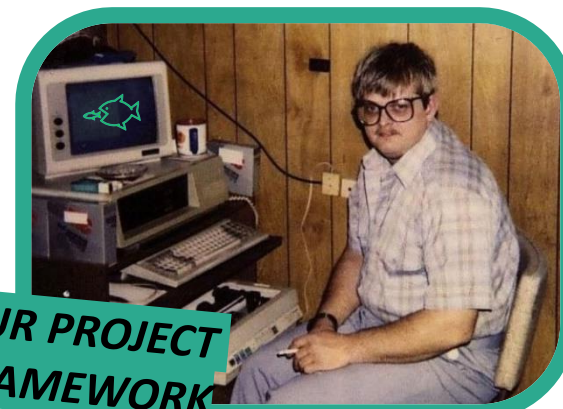
WP5 Spatial components



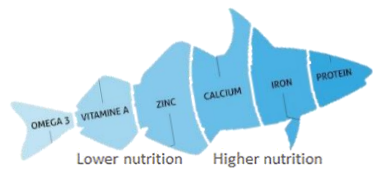
WP6 Evaluation of management strategies



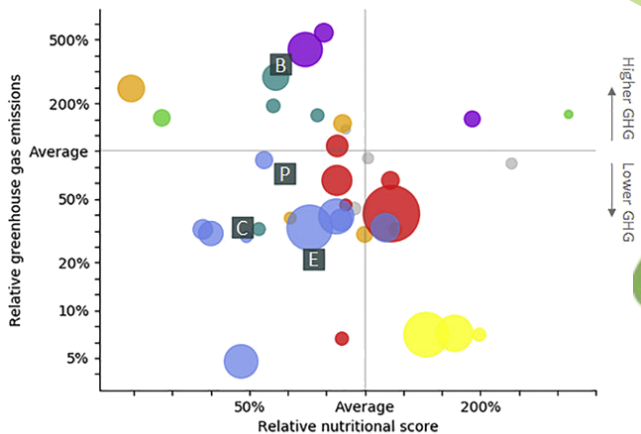
OUR PROJECT FRAMEWORK



# SEAwise framework: socio-economics



Health benefits & carbon footprint

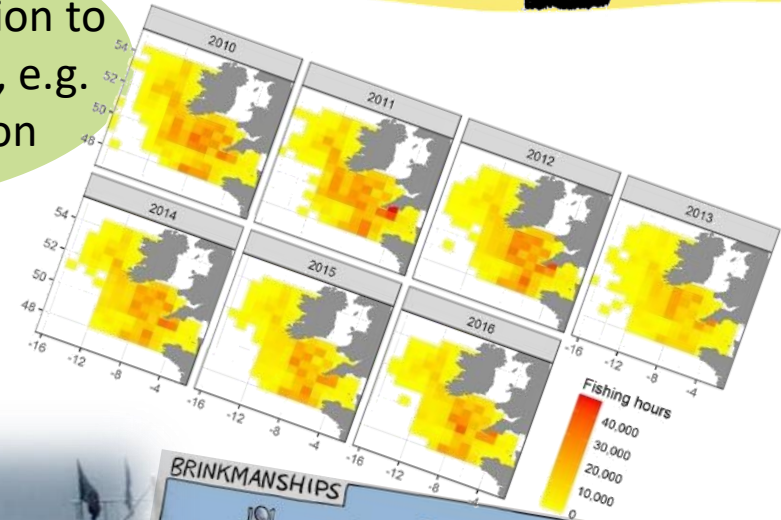


Fishers behavior in relation to management measures, e.g. spatial effort allocation

Social consequences of management measures, incl. Brexit, development of new social indicators

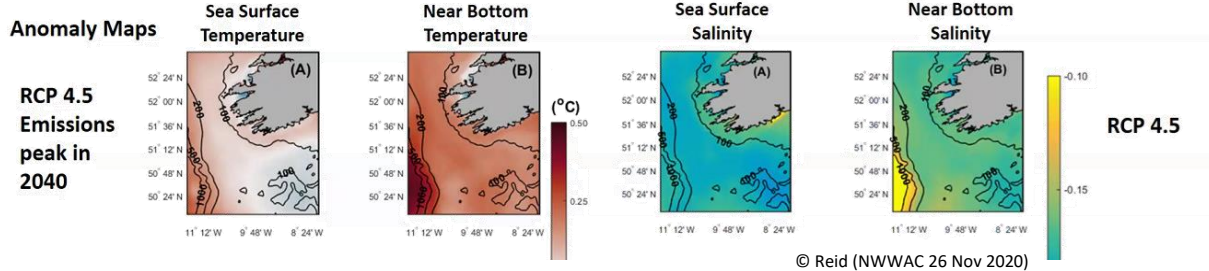
- Cods, hakes, etc.
- Lobsters and shrimps
- Mollusc/shellfish
- Flatfishes
- Freshwater white fish
- Other
- Herrings, mackerels, etc.
- Salmon, trout

WP2: fisheries as social-ecological system

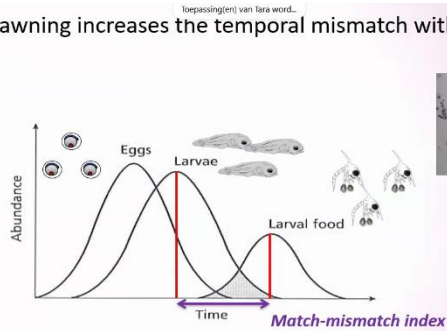


# SEAwise framework: productivity

Warmer and fresher under **climate change**

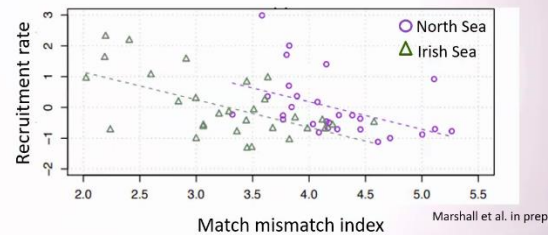


Earlier spawning increases the temporal mismatch with larval prey



Recruitment rates of cod are temperature-dependent

As mismatch increases due to earlier spawning → recruitment rates of Irish Sea cod have decreased



Recruitment rates

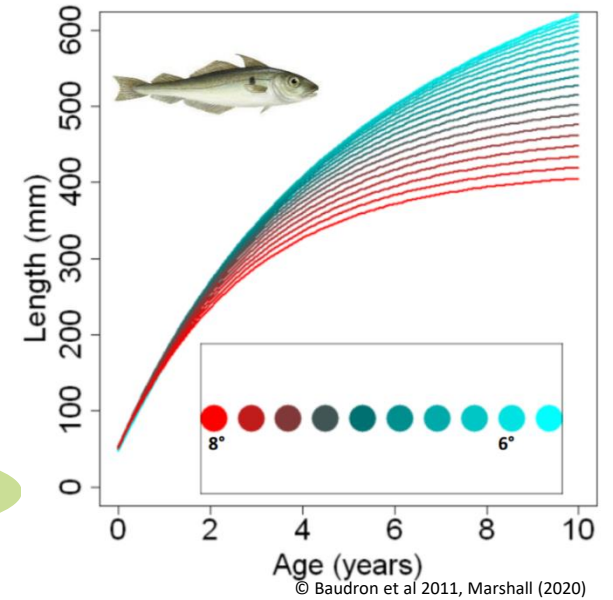
Natural mortality rates

Individual growth rates

biomass

Maturity rates

WP3: ecosystem change ON fish & health

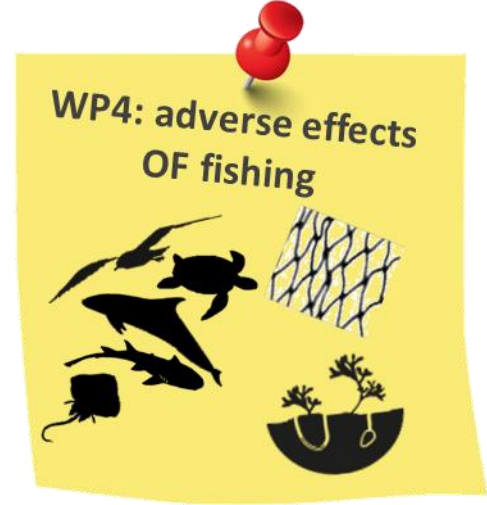


# SEAwise framework: adverse ecosystem effects

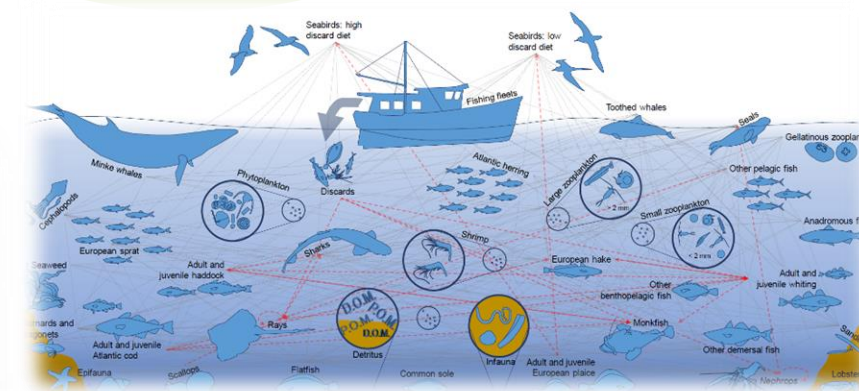


© Gönener

Bycatch of Protected Endangered Threatened species



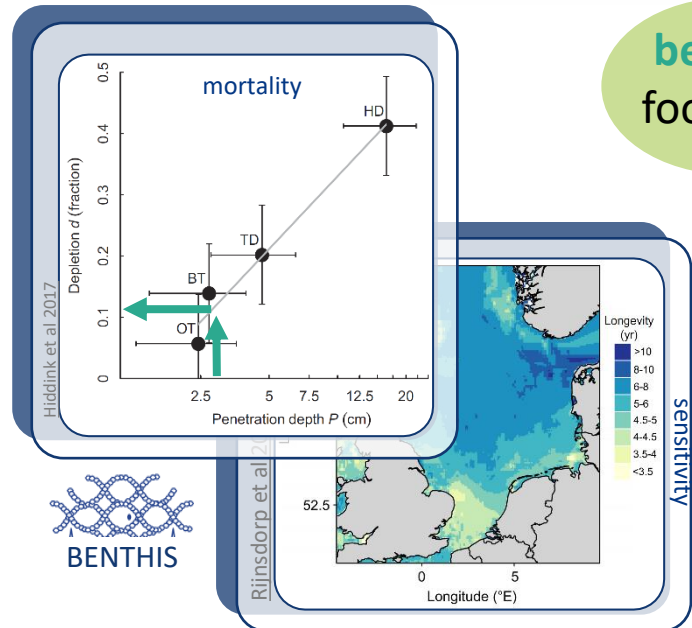
Fishing impacts on food webs



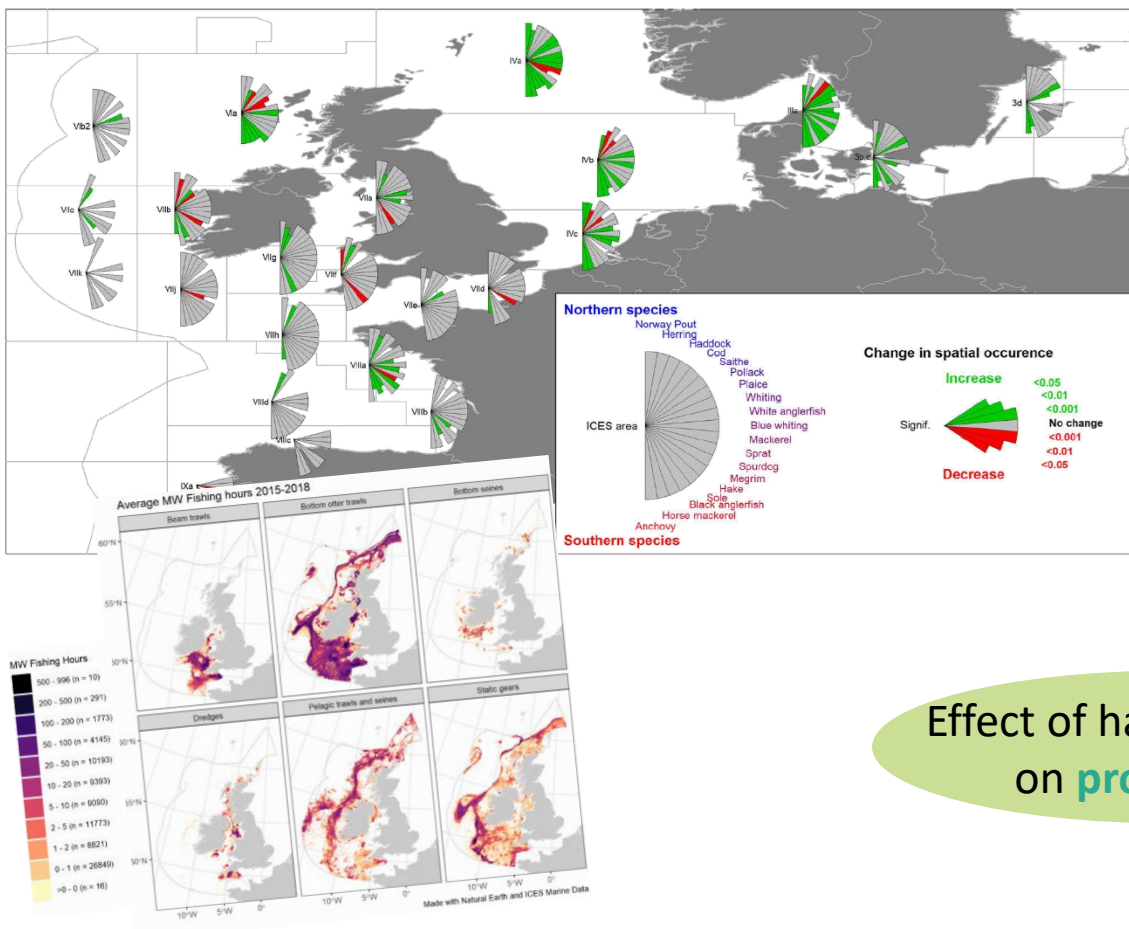
© Bentley et al (2018)

benthic footprint

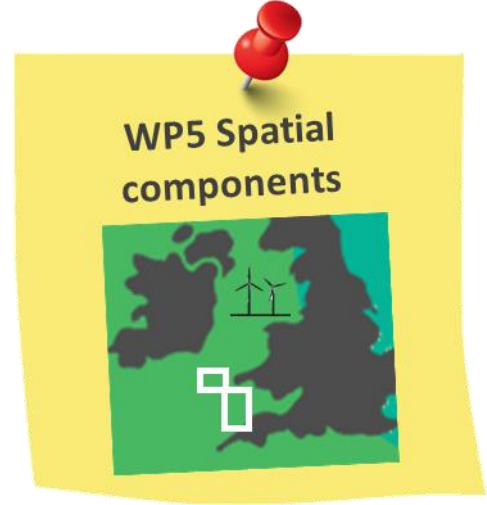
litter footprint



# SEAwise framework: spatial components



Spatial distribution of fish & fisheries



Predicting the effect of changes in fishable area

Effect of habitat changes on productivity



- Effect of spatial and temporal closures, gear restrictions, selectivity changes
- Changes in productivity and its consequences to fish abundance and spatial distribution of fleets
- impact on stock management of *Nephrops*, sole, hake, haddock, cod, whiting, anglerfish, seabass, megrim...

# SEAwise framework: management & advice

WP6 Evaluation of management strategies

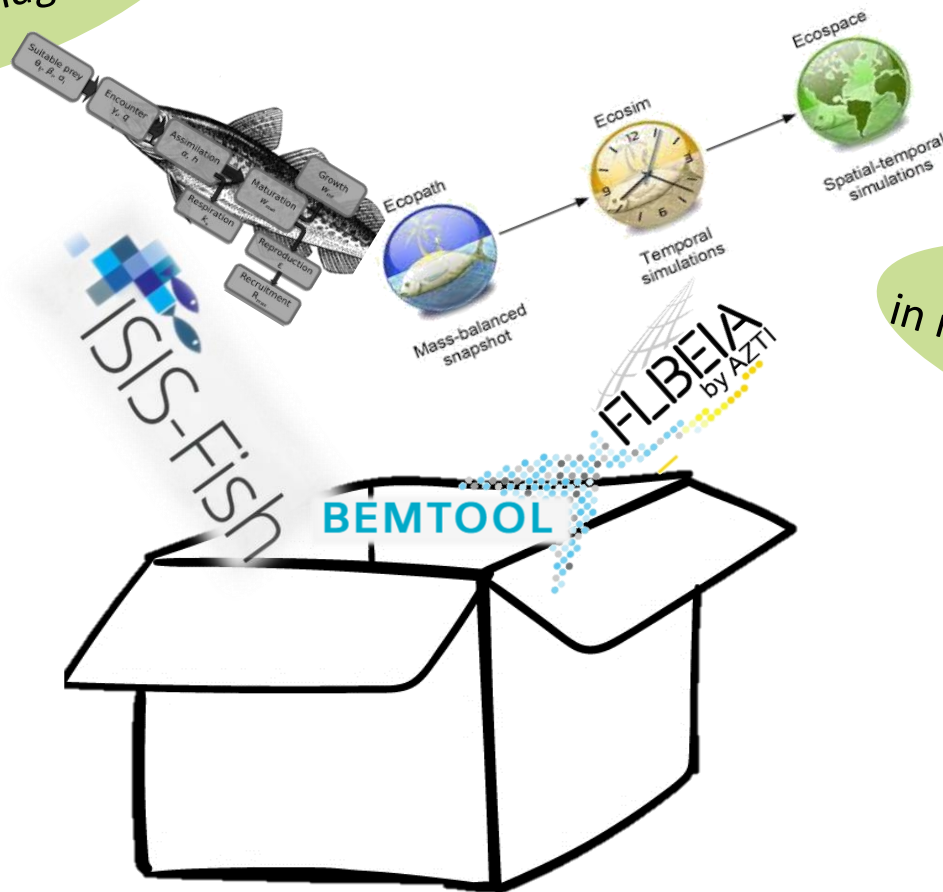


Integration of **social and economic** effects in predicting effectiveness of management

Integration of ecosystem change in **stock productivity**

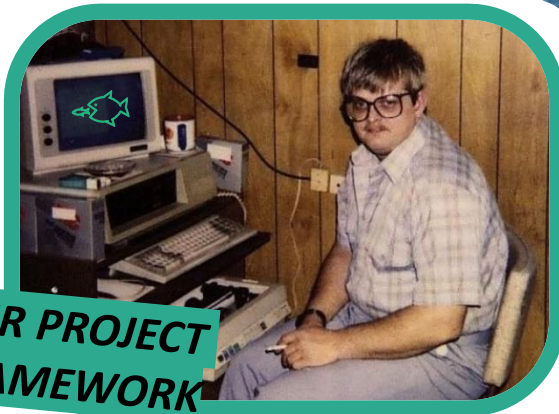
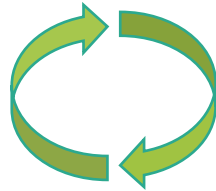
Design and evaluation of **management strategies**

**Targets and limits** in relation to ecosystem change



So back to our question  
to please jump with us . . .

YOUR INPUT



OUR PROJECT  
FRAMEWORK



# What would participating in the network entail?

SEAwise network participant(s) within NWWAC are invited to the four SEAwise co-design workshops:

Autumn 2021: Stakeholder scoping of key ecosystem priorities and measures

Spring 2023: 1<sup>st</sup> presentation of management strategy evaluation results

Autumn 2024: 2<sup>nd</sup> presentation of management strategy evaluation results

Spring 2025: Synthesis and advice demonstration in Brussels

The first three of these can be organized together with you to fit your schedule and reduce travel.

We also hope you will attend the SEAwise/ICES/GFCM workshops to determine best approaches to EBFM in autumn 2023 and winter 2025.

Between these meetings, “expert advice users” are invited to comment on key priorities and formats for advice, welcome us to your meetings, attend online meetings, or participate in specific interviews.



**End-user  
driven  
advice**



A dynamic, collaborative network is  
key to the success of SEAWISE.



And it only works if you  
feel it is worth your while!

Thank you!

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