Update on the results of SEAwise project and tools to facilitate the implementation of ecosystem-based fisheries management

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MEDAC WG1-WG5 meeting

SEAwise and the Ecosystem Based Fisheries Management in Europe.

EBFM = Ecosystem Based Fisheries Management

Management	Social & economic elements	Fishing elements	Ecosystem elements	Management framework
EBFM Ecosystem-Based Fisheries Management	All elements	All fisheries in region	Some elements	**CFP*, MSFD**** *Common Fisheries Policy **EU Marine Strategy Framework Directive
EAFM Ecosystem Approach to Fisheries Management	Not considered	All fisheries in region	Some elements	**CFP**
SS Single Species Approach to Fisheries Management	Not considered	Focal fishery only	Target species only	**CFP**

an approach that takes a holistic overview of all ecosystem elements related to fisheries – including impacts on stocks, marine environments, social benefits, and heritage.

For an effective implementation of Ecosystem Based Fisheries Management in Europe

Beginning in October 2021 as part of EU's Horizon 2020 programme, SEAwise will work until September 2025 to address the four key challenges to the effective implementation of EBFM today:

1. Lack of end-user driven advice

2. Lack of clear and widely accepted priorities

3. Gaps in existing knowledge

4. Lack of accurate and adaptive methods

SEAwise as a collaborative network

Working as a collaborative network, SEAwise delivers a **fully operational approach for stakeholders and policy makers** to easily apply EBFM in their own fisheries.

SEAwise is **creating tools** and advice for collaborative management under environmental change and increasing competition for marine space.

https://seawiseproject.org/seawise-results/

A collaborative network

SEAwise results in brief with a focus on the Mediterranean Case Study

Co-design an effective and socially acceptable governance for the Adriatic Ionian region accounting for its peculiar traits:

- collating all the available information and data (structured review);

- scoping workshops, interviews with fishers and stakeholders;

- developing/applying biological, economic and social indicators for the region;

- developing ecological, spatial, bio-economic, MSE modelling for predictions, including climate change;

- evaluating the outcomes of co-designed social and ecological predictable management strategies.

Social system

Fisheries

Ecological system
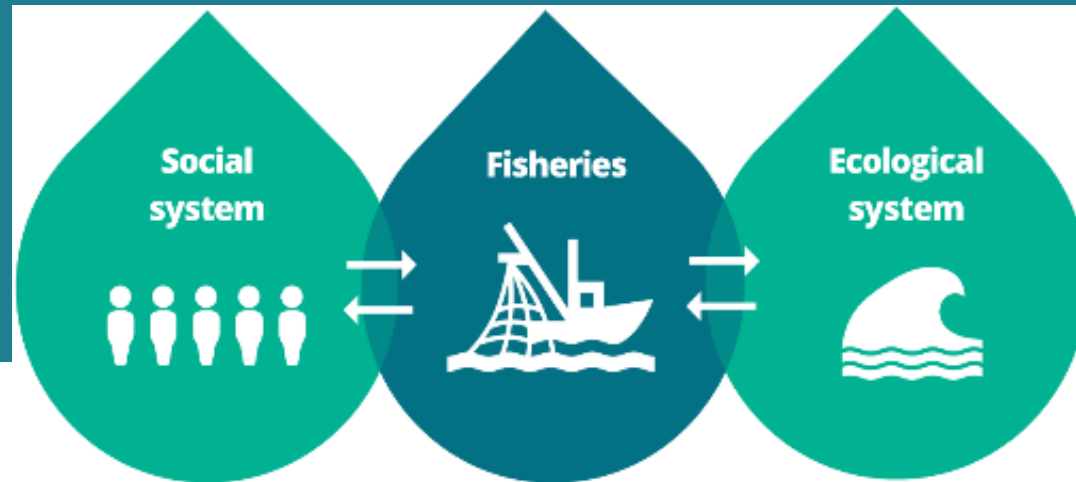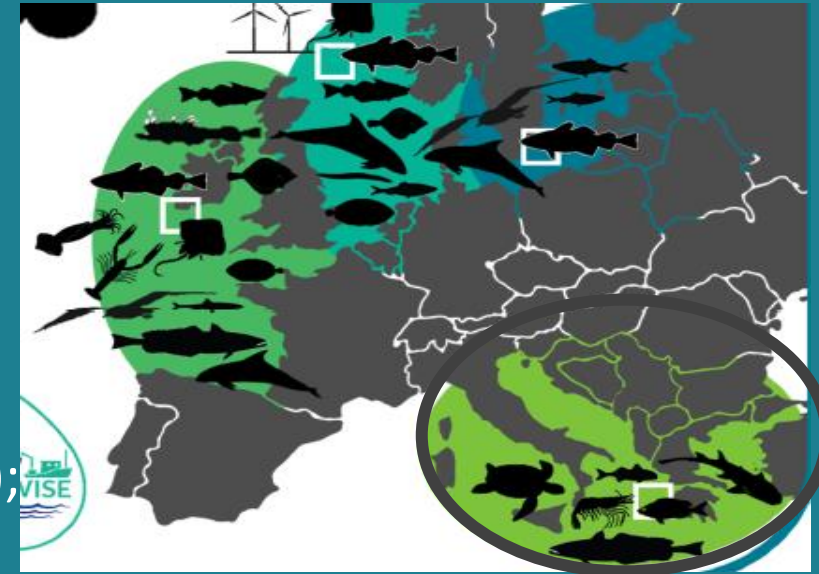
Practical insights. Applicable tools. Ecosystem based management.

......evaluating models, methods to determine how good they are and efficiency of the current management in attaining objectives

Improving modelling of:

- Effects of fisher behaviour on catches, of management on economic performance and of fish on human health;

- Effects of climate and density on productivity of fished stocks;

- Effects of fishing on bycatch, benthic habitats, food webs and litter;

- Predictions of whether all targets can be attained at the same time;

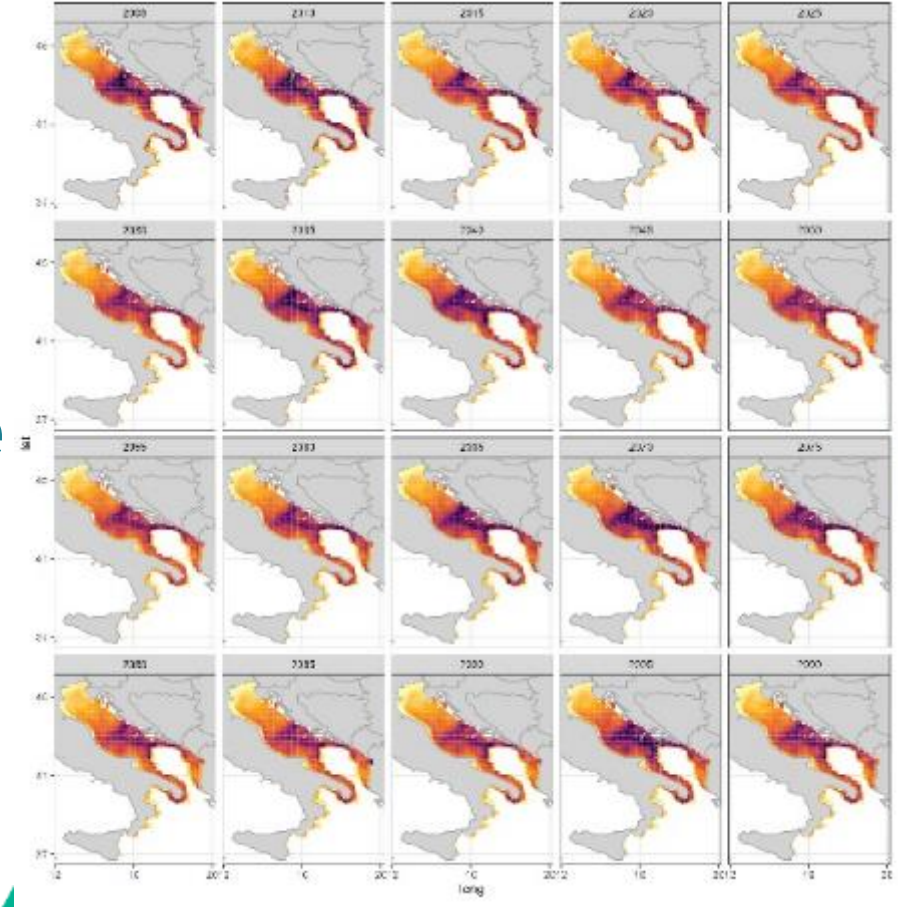- Choosing cases and getting ready to show the results to end users.

SEAWISE

Ecological effects of fisheries

benthic state assessments
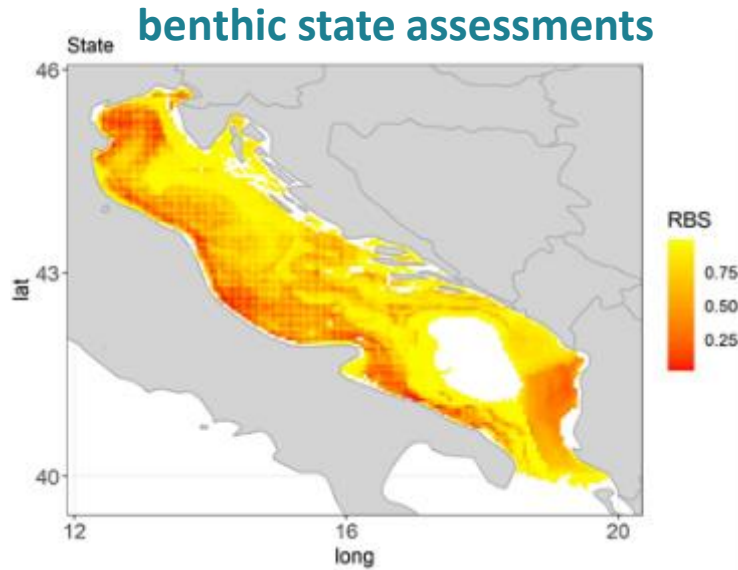
Predicting abundance changes

Predicting effects of changes in fishable areas on fish and fisheries
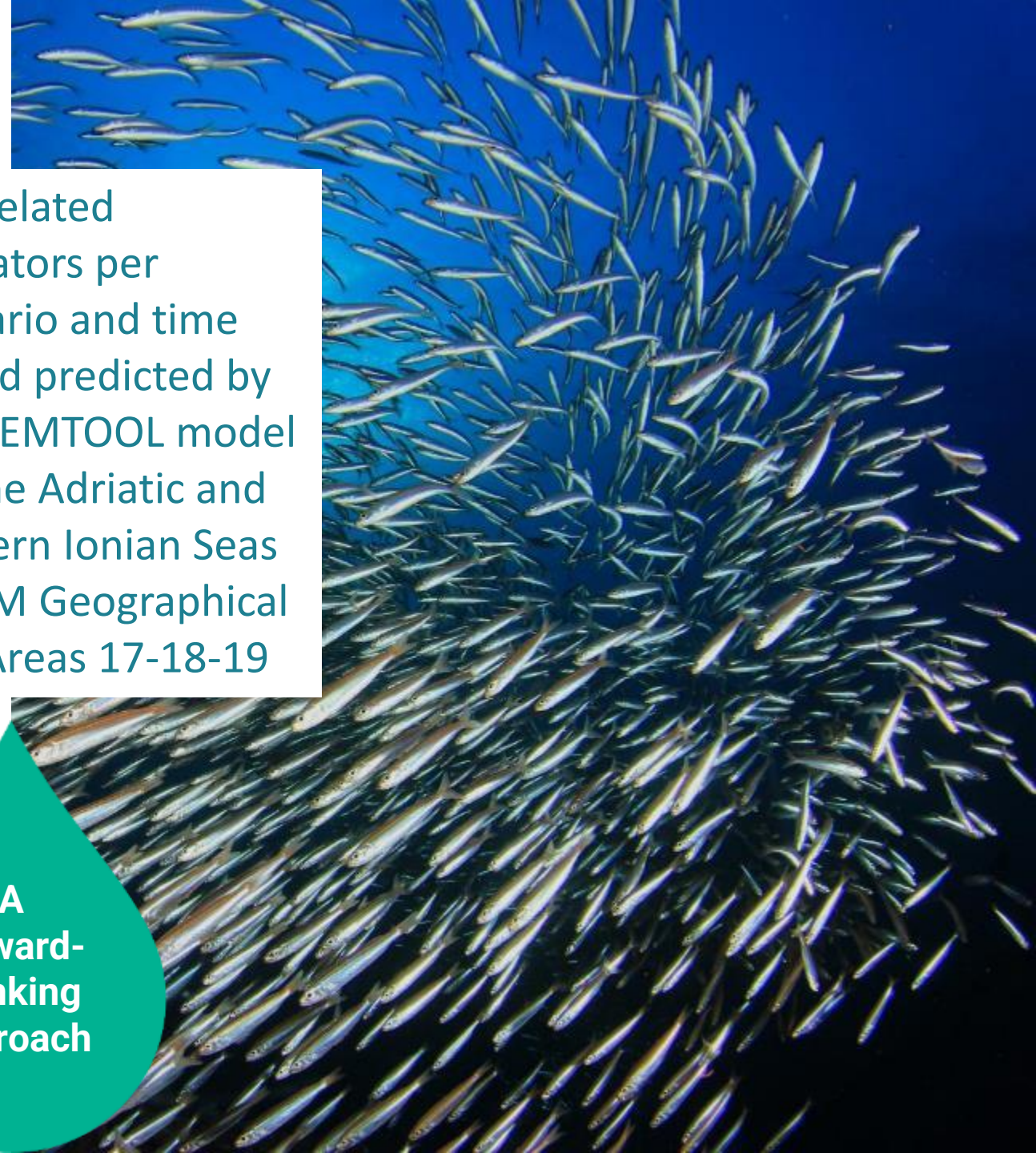
💧 **Hot spot management**

Ecosystem based management.

Insights

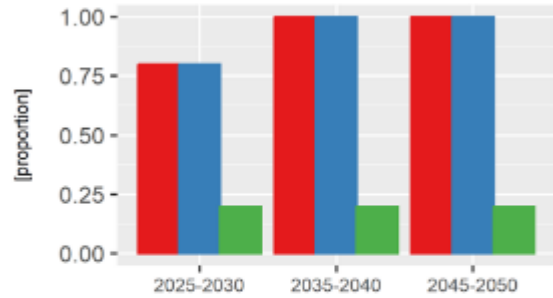💧 **Avoidance of unwanted catch through improved selectivity, gear technology, fleet behaviour.**

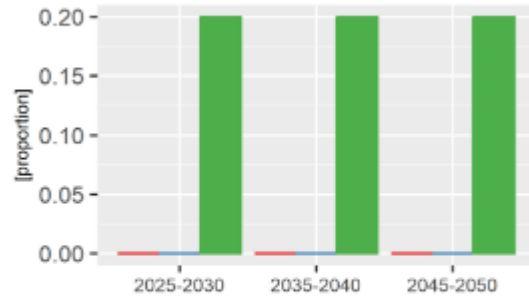# Examples of social system indicators produced

CFP related indicators per scenario and time period predicted by the BEMTOOL model for the Adriatic and western Ionian Seas (GFCM Geographical Sub Areas 17-18-19
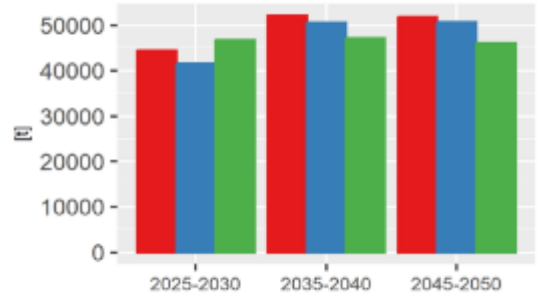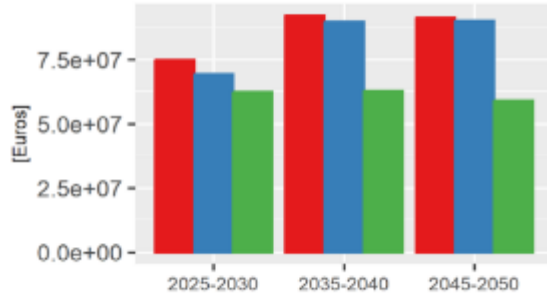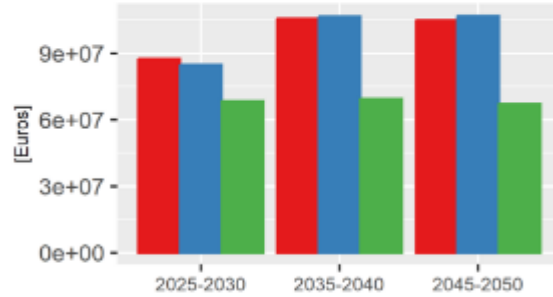
A forward-thinking approach
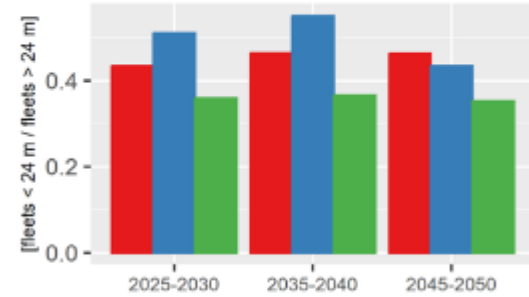
Classification of health impacts of different fish species and sizes

PERSONALISED SEAFOOD RECOMMENDATION

- Consume fish weekly: 1-2 servings of seafood per week and up to 3-4 servings per week
- Alternate fatty fish and lean fish

★★★
BEST FOR YOU

★★☆
VERY GOOD FOR YOU

★☆☆
GOOD FOR YOU

ADDITIONAL TIPS

- Vary species and locations (especially for large consumers), to limit exposure to contaminants
- You can choose from fresh, frozen, and canned products, and if dried fish products, choose the ones with less salt
- Eat as little as possible fried or breaded fish products. Avoid ultra-processed fish products
- Choose sustainably sourced fish
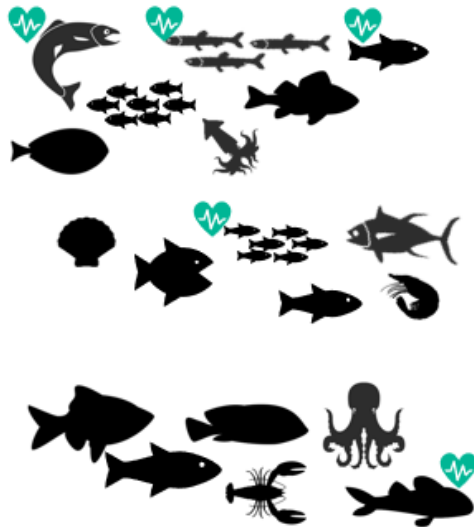
Fatty fish present high content of healthy omega 3 fatty acids

⚠ Age, condition and country specific limits and advices
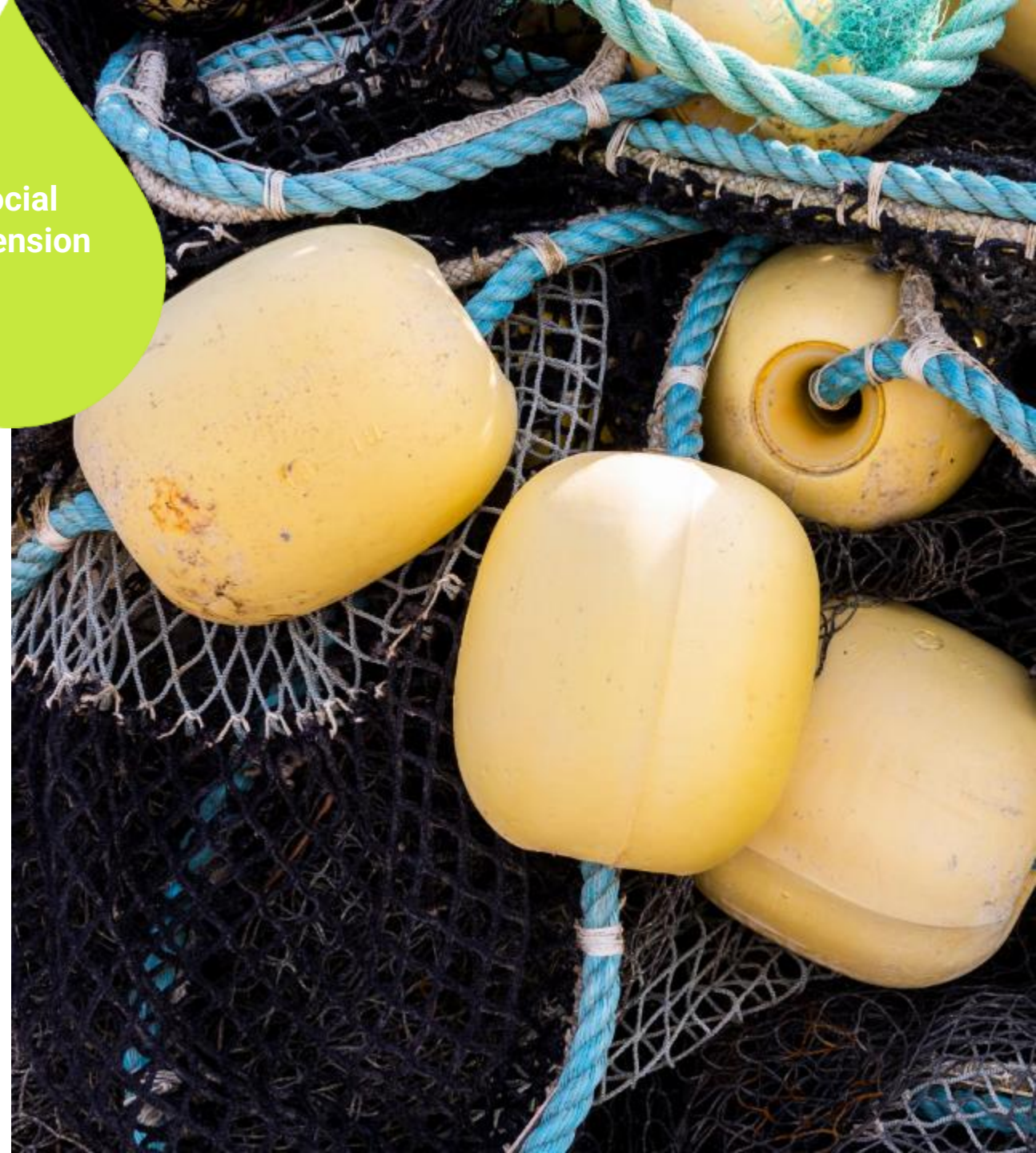
WP 2
SOCIAL ECONOMIC EFFECTS

Social dimension

Understanding social- ecological systems requires knowledge on the social side of the ecosystem.
In SEAwise we are approaching this from different perspectives:

Social dimension

Fisher behaviour

Governance

Social impact

Links with

- ICES WGSOCIAL
- STECF EWG 2022
- RCGECON
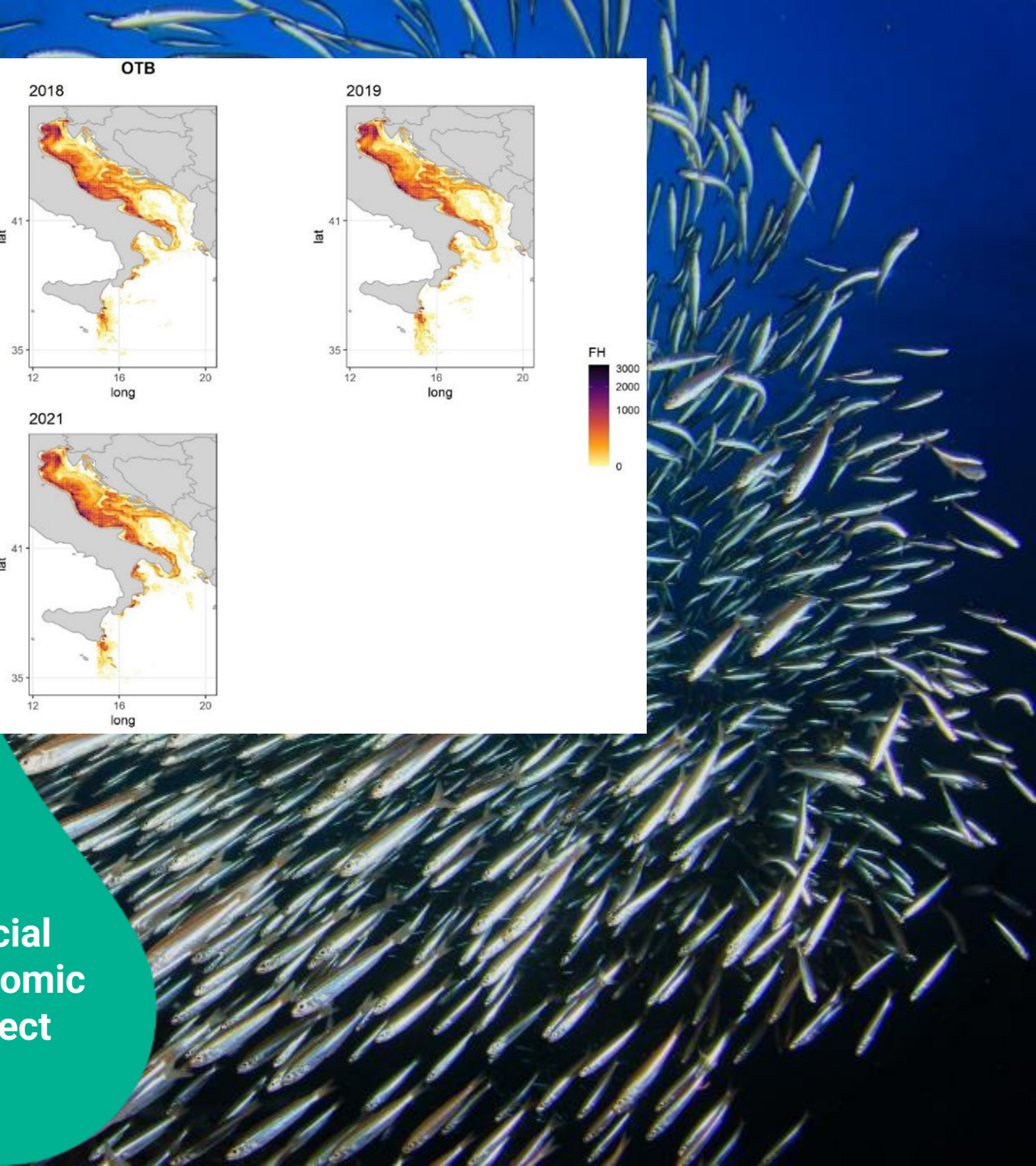
Fishers' behaviour and defining fishing community

A specific investigation is ongoing to shape fishing community in the Adriatic-Ionian region, after the progresses done in the North Sea, first considering:

- vessel type, gear, investment choices
- landing port, home port, fishing footprint
- fishing patterns: i.e. daily or others
- catches, landings (discards)
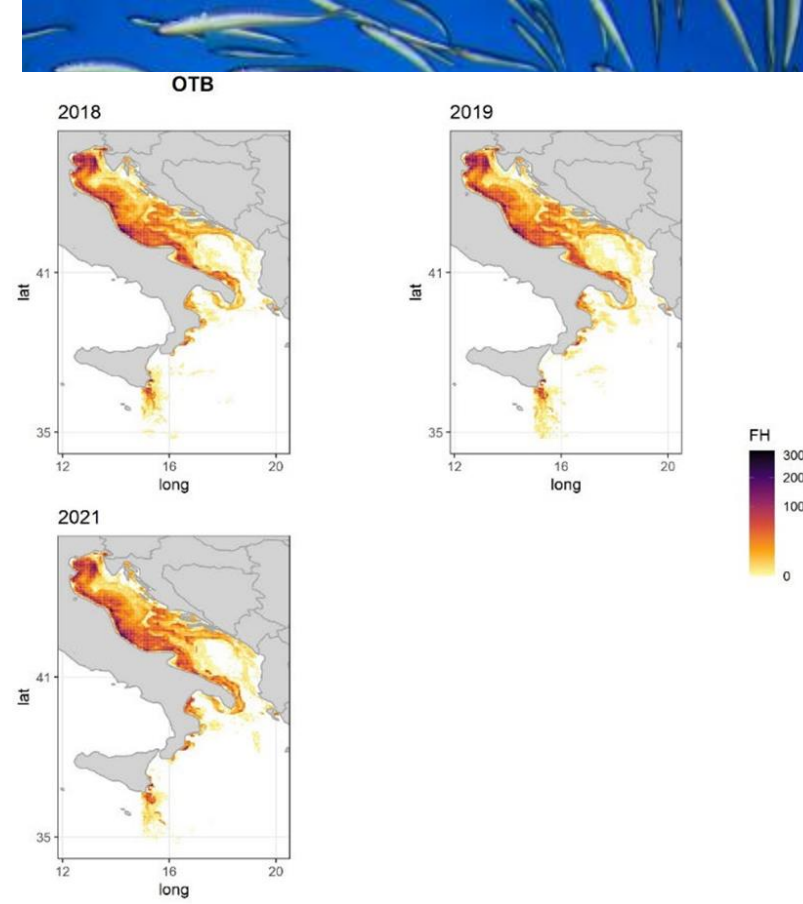

social economic effect

Fishers' behaviour and fishing community

.....the social community of fishers, local specialization (e.g., SSF vs. LSF), economic performance, target species and market, cultural heritage,...fishers' behavior...

as fishers can be specialists or switchers, can prefer to optimise different targets depending from motivation:

- profits, large catches,
- exploring new areas, or continue to fish where they know,
- optimize distance from the port,
- save fuel and money
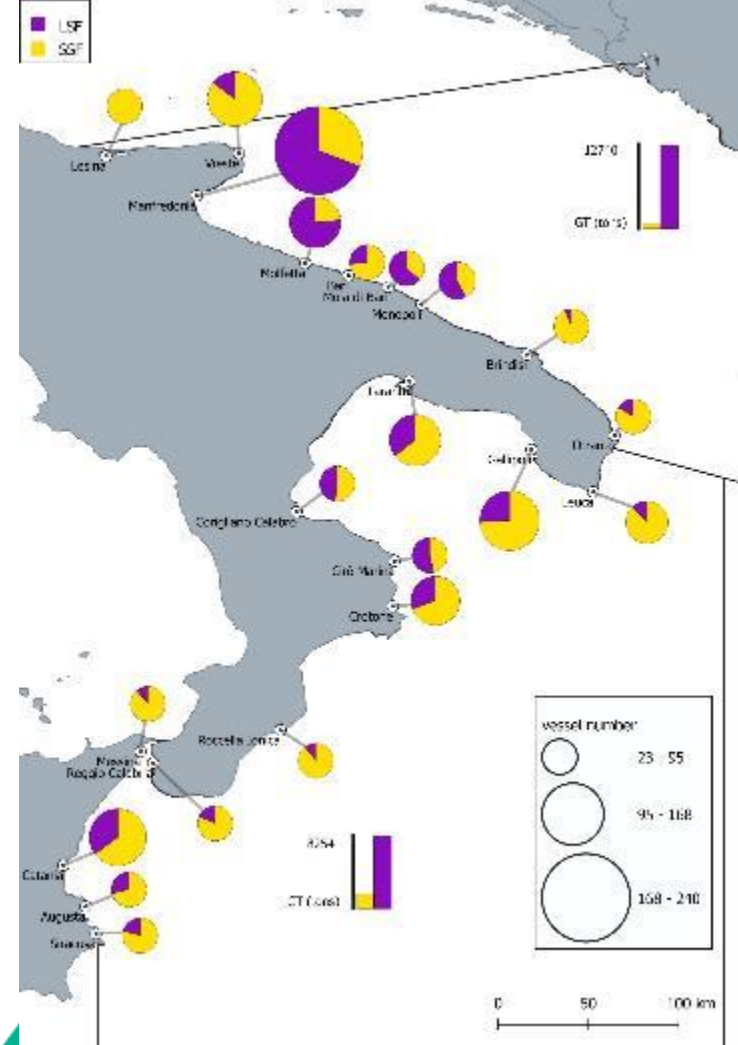
Strengthening the Social dimension of the CFP

THE SEAWISE EBFM TOOL AND TOOLBOX

Two tools are envisaged that will suit the needs and priorities of the SEAwise Stakeholder Network. Both tools will provide accessible, useful information in support of better EBFM in Europe.

The tools will:

- Cross-cutting across case study regions
- Informed by stakeholder input
- Addressing key knowledge gaps

Applicable tools. Ecosystem based management.

THE EBFM TOOL

A suite of social and economic indicators discussed in the Workshop held in June

Costs

Revenues & Profits

employment

GVA, Gross Profit, CR/BER, fuel consumption per kg fish, average wages, CO_2 emission, SSF vs. LSF, FTE, number of fish portions...

Applicable tools. Ecosystem based management.

Thank you for your input to help us target our work on advice that is meaningful to end users!