# Welcome to the Joint AC – SURIMI workshop

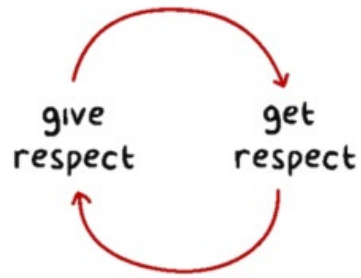
**The workshop will start at 9:30 CET**

surimi-project.eu  SURIMI Project  @surimi_project

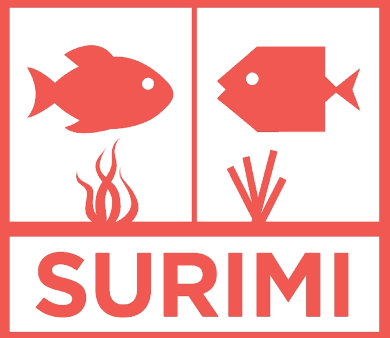
Funded by
the European Union

# Welcome

- How this workshop came to be
- High-level participant introductions
- Recording of meeting for minutes
- Meeting etiquette / Communication
  - Chatham House Rule: “participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed”
  - This includes social media - please do not quote others.
    - Please turn on your camera when speaking / raising hand.
    - Please be respectful of one another.



# Objectives, agenda and introduction to SURIMI



# Objectives of the workshop

- Introduce the SURIMI Project
- Share information about the scientific fisheries management models that we will integrate
- Collect your inputs to guide the tool development and design
- Answer any questions you might have

# Agenda

| Time | Agenda Point | Details |
|---|---|---|
| 9:30-9:55 | **Opening session** | - Welcome & introductions<br>- Objectives<br>- Introduction to SURIMI and the models |
| 9:55-10:40 | **Modelling session** | - Diving deeper into the models<br>- Short video of each model<br>- Q&A |
| 10:40-10:55 | Coffee break | |
| 10:55-12:20 | **Online tool and feedback session** | - Introduction to the online tool (visual interface)<br>- Providing feedback on key questions which will guide the future design<br>- Plenary discussion |
| 12:20-12:30 | **Closing and next steps** | - Summary and key take-aways<br>- Next steps |

SURIMI

EU MISSION: RESTORE OUR OCEAN AND WATERS

# Implementing socio-ecological models into the European Digital Twin Ocean to guide real-world problem-solving and policy creation

SURIMI

## AT A GLANCE

**Name:** SURIMI - Integration of innovative and reliable socio-ecological models and user-driven solutions into the Digital Twin Ocean, to facilitate what-if scenarios and decision support, under a co-creation approach.

**Programme:** Horizon Europe

**Call Topic:** HORIZON-MISS-2023-OCEAN-01-08

**Type of Action:** Research and Innovation Action (RIA)

**Duration:** May 2024 – April 2027 (36 Months)

**Coordinator:** NORCE Norwegian Research Centre AS

**Consortium:** 8 partners

**Countries:** 7

**Total Budget:** €3.4 million

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## PARTNERS

NORCE

Ecopath International Initiative

European Marine Board Advancing Seas & Ocean Science

IRPPS Istituto di Ricerche sulla Popolazione e le Politiche Sociali

ERINN INNOVATION

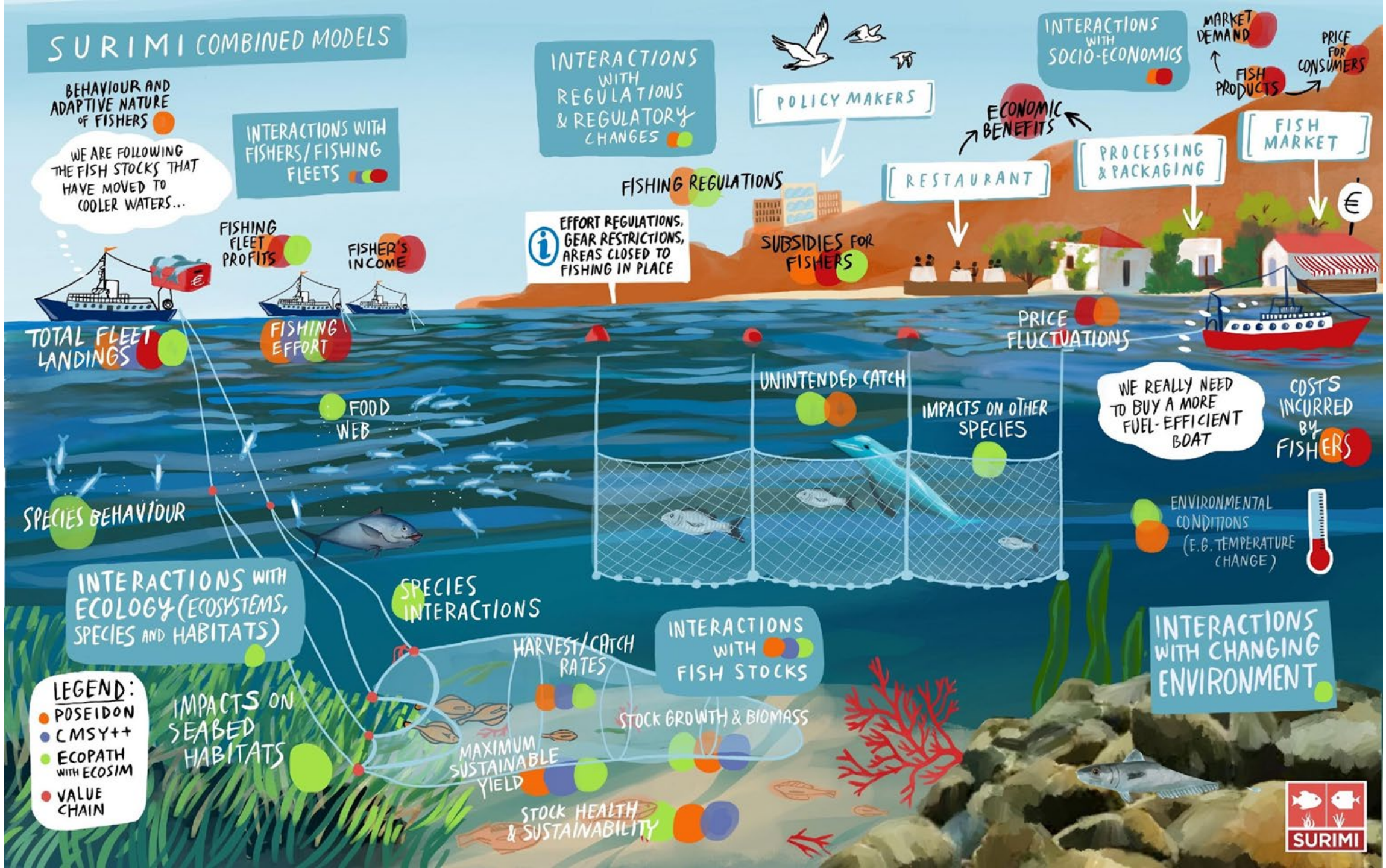
Aristotle University of Thessaloniki

Vonnecta systems

University of Oxford

# SURIMI toolbox

- Set of **socio-ecological models** relevant for understanding the dynamics of human fishery activities
- Accompanied by **assessment and policy modules** to retrieve important information and simulate the probable effects of selected **what-if scenarios** .
- **SURIMI toolbox (online tool)** will package the models and datasets and provide a **user-friendly, interactive interface** that will support stakeholder interaction with the tools.

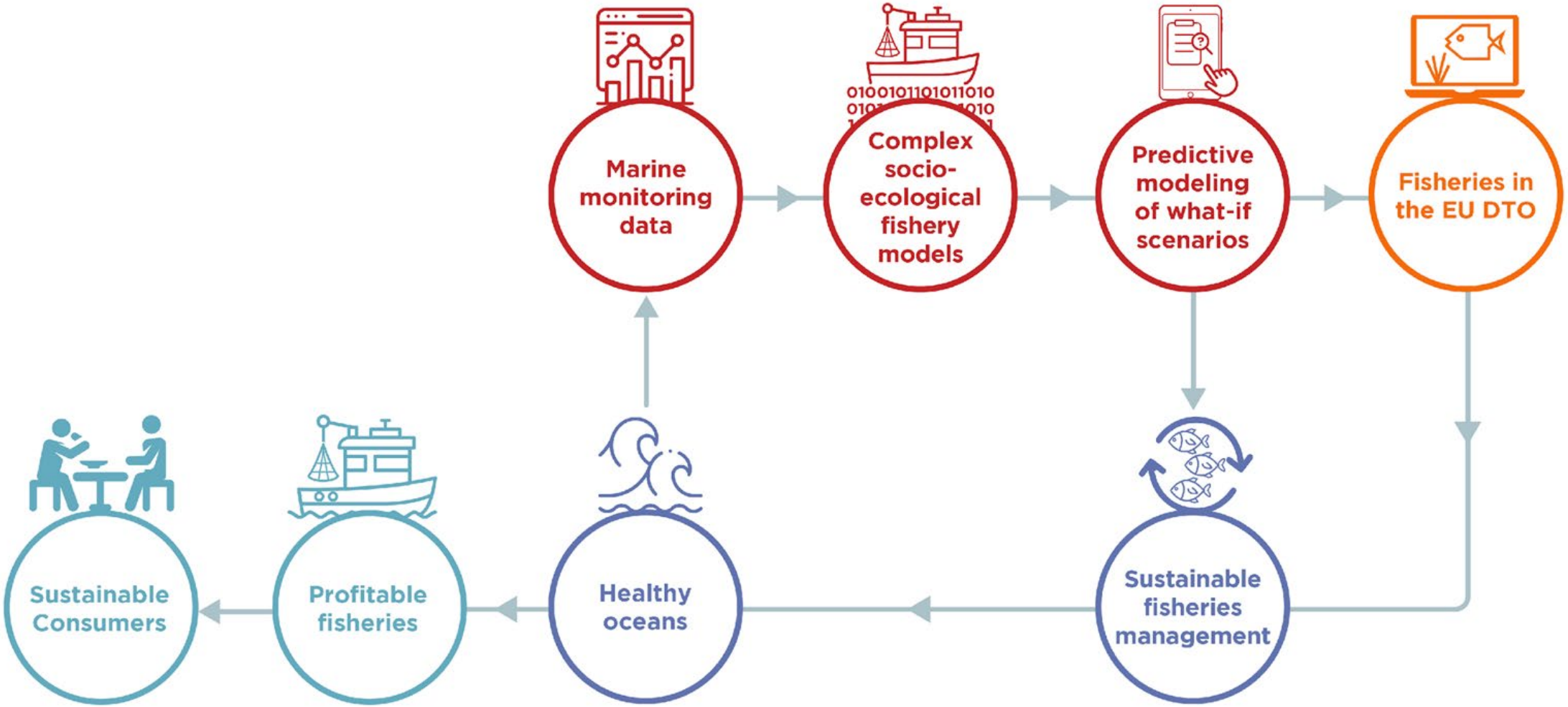

SURIMI COMBINED MODELS
BEHAVIOUR AND ADAPTIVE NATURE OF FISHERS
WE ARE FOLLOWING THE FISH STOCKS THAT HAVE MOVED TO COOLER WATERS...
INTERACTIONS WITH FISHERS/FISHING FLEETS
INTERACTIONS WITH REGULATIONS & REGULATORY CHANGES
POLICY MAKERS
FISHING REGULATIONS
EFFORT REGULATIONS, GEAR RESTRICTIONS, AREAS CLOSED TO FISHING IN PLACE
SUBSIDIES FOR FISHERS
INTERACTIONS WITH SOCIO-ECONOMICS
MARKET DEMAND
PRICE FOR CONSUMERS
FISH PRODUCTS
ECONOMIC BENEFITS
RESTAURANT
PROCESSING & PACKAGING
FISH MARKET
FISHING FLEET PROFITS
FISHER'S INCOME
TOTAL FLEET LANDINGS
FISHING EFFORT
PRICE FLUCTUATIONS
FOOD WEB
UNINTENDED CATCH
IMPACTS ON OTHER SPECIES
WE REALLY NEED TO BUY A MORE FUEL-EFFICIENT BOAT
COSTS INCURRED BY FISHERS
SPECIES BEHAVIOUR
ENVIRONMENTAL CONDITIONS (E.G. TEMPERATURE CHANGE)
INTERACTIONS WITH ECOLOGY (ECOSYSTEMS, SPECIES AND HABITATS)
SPECIES INTERACTIONS
HARVEST/CATCH RATES
INTERACTIONS WITH FISH STOCKS
INTERACTIONS WITH CHANGING ENVIRONMENT
STOCK GROWTH & BIOMASS
MAXIMUM SUSTAINABLE YIELD
STOCK HEALTH & SUSTAINABILITY
IMPACTS ON SEABED HABITATS
LEGEND:
POSEIDON
CMSY++
ECOPATH WITH ECOSIM
VALUE CHAIN
SURIMI

# EU Digital Twin of the Ocean

- The European Digital Twin of the Ocean (EU DTO) aims to be a near real-time **virtual representation of the ocean** that is accessible to all.
- EU DTO combines **ocean observations**, **artificial intelligence** and high-performance **computational modelling**.
- It uses modelling tools using **real-time and historical data** to **simulate scenarios**, allowing stakeholders to make decisions based on data.

**The SURIMI Toolbox will be integrated into the EU DTO**

# SURIMI Value Chain



# Introduction to SURIMI official video:

https://www.surimi-project.eu/overview/

# Introduction to SURIMI models video:

https://www.youtube.com/watch?v=Rk6whwQVbNI

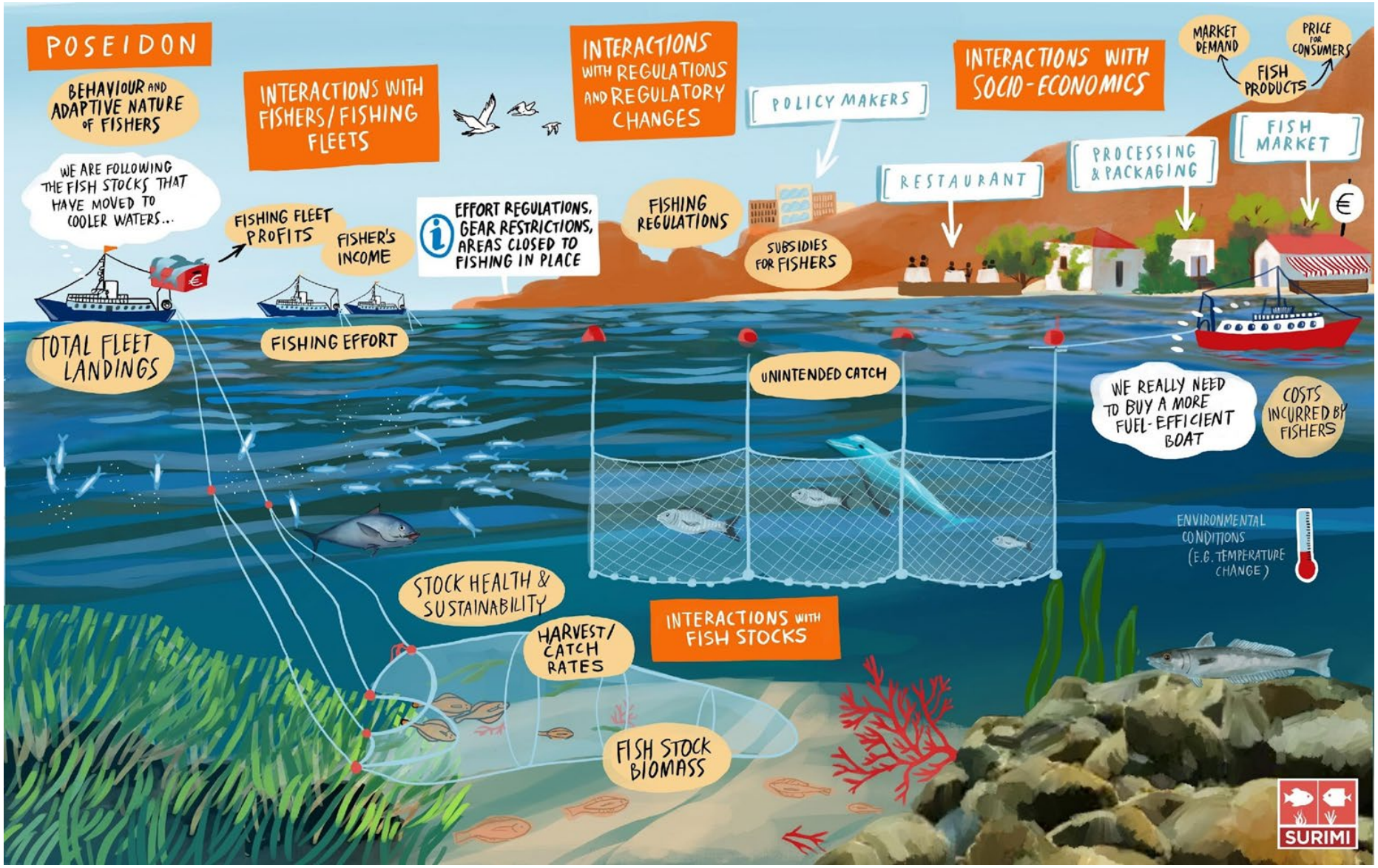
# Modelling session:

Diving deeper into the models

# SURIMI models

- Models are well-established and have been implemented individually throughout the world
- Novelty in SURIMI: we will combine the models, so they can be used in combination
- Case study area: Western Mediterranean

# POSEIDON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WE REALLY NEED TO BUY A MORE FUEL-EFFICIENT BOAT
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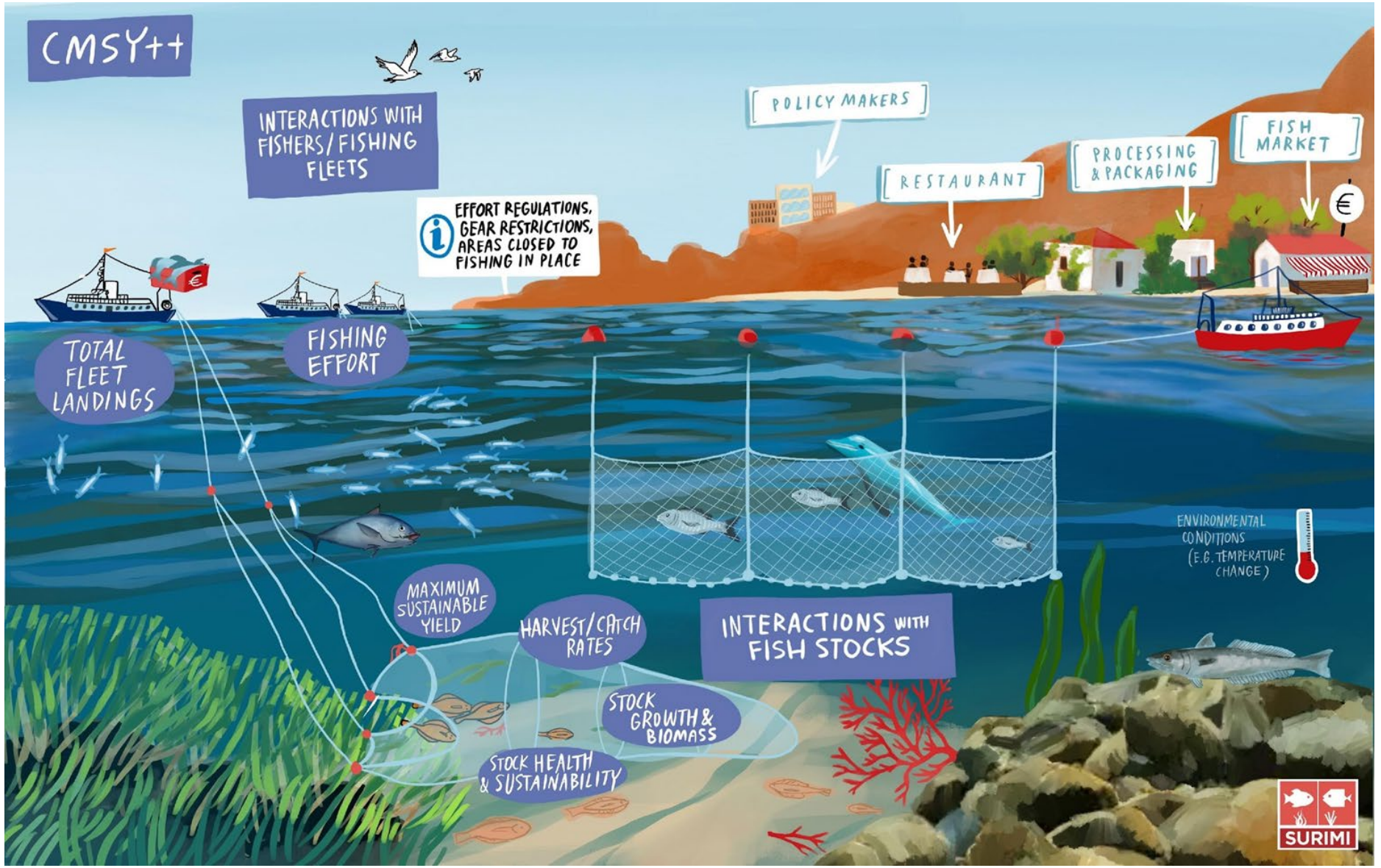
HARVEST/CATCH RATES
INTERACTIONS WITH FISH STOCKS
FISH STOCK BIOMASS
SURIMI

# CMSY++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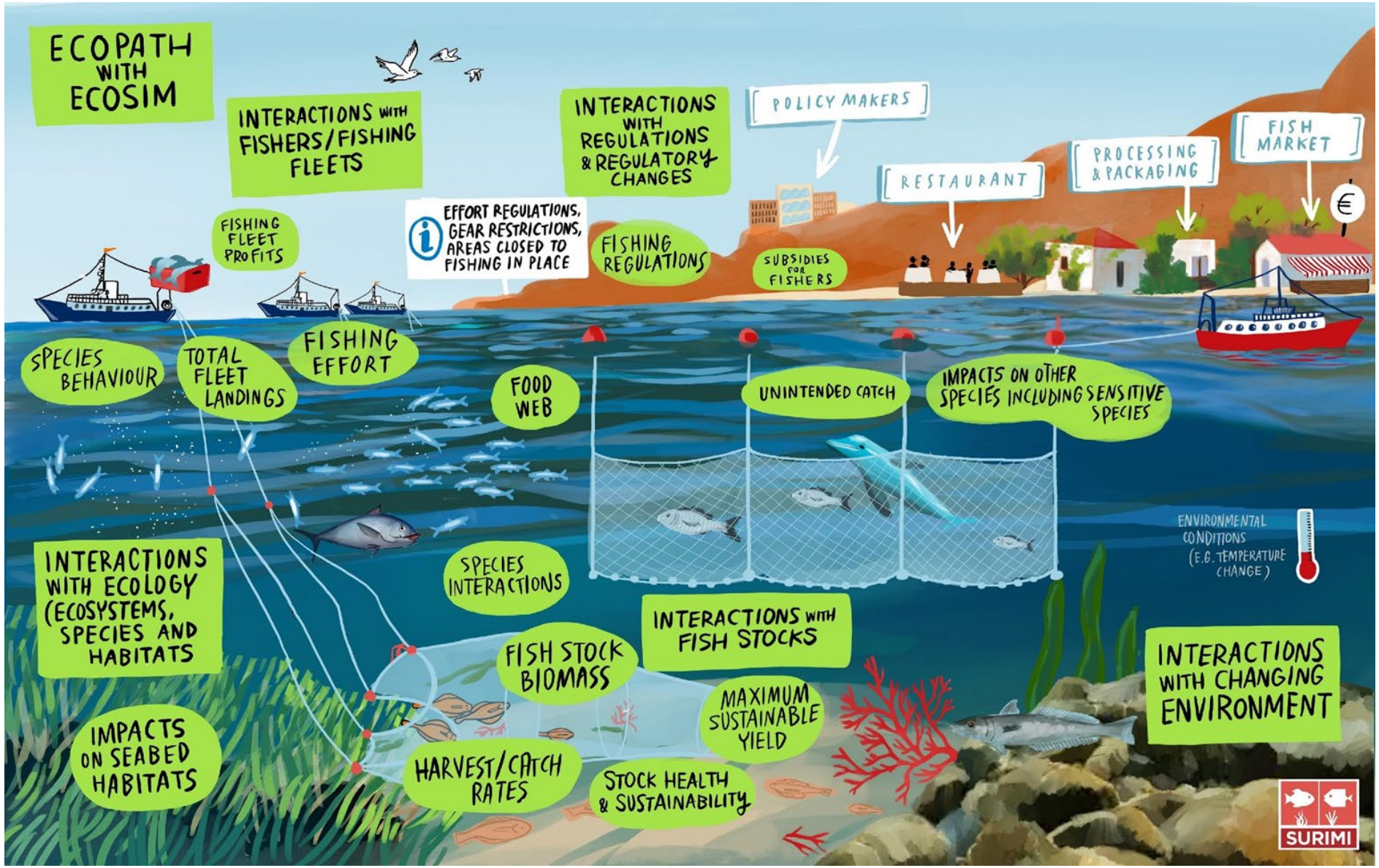
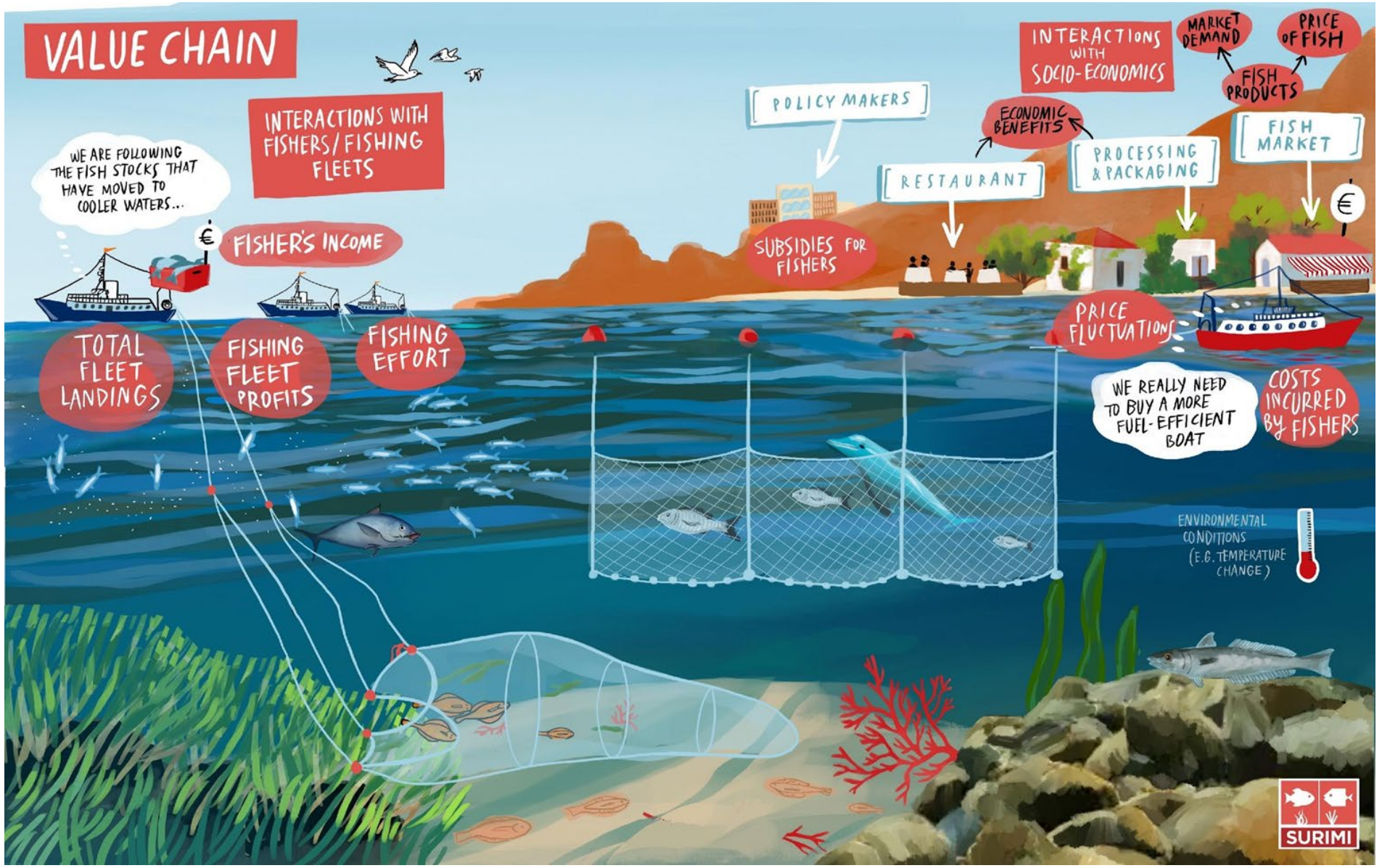
SURIMI

# Ecopath with Ecosim (EwE)



# Value Chain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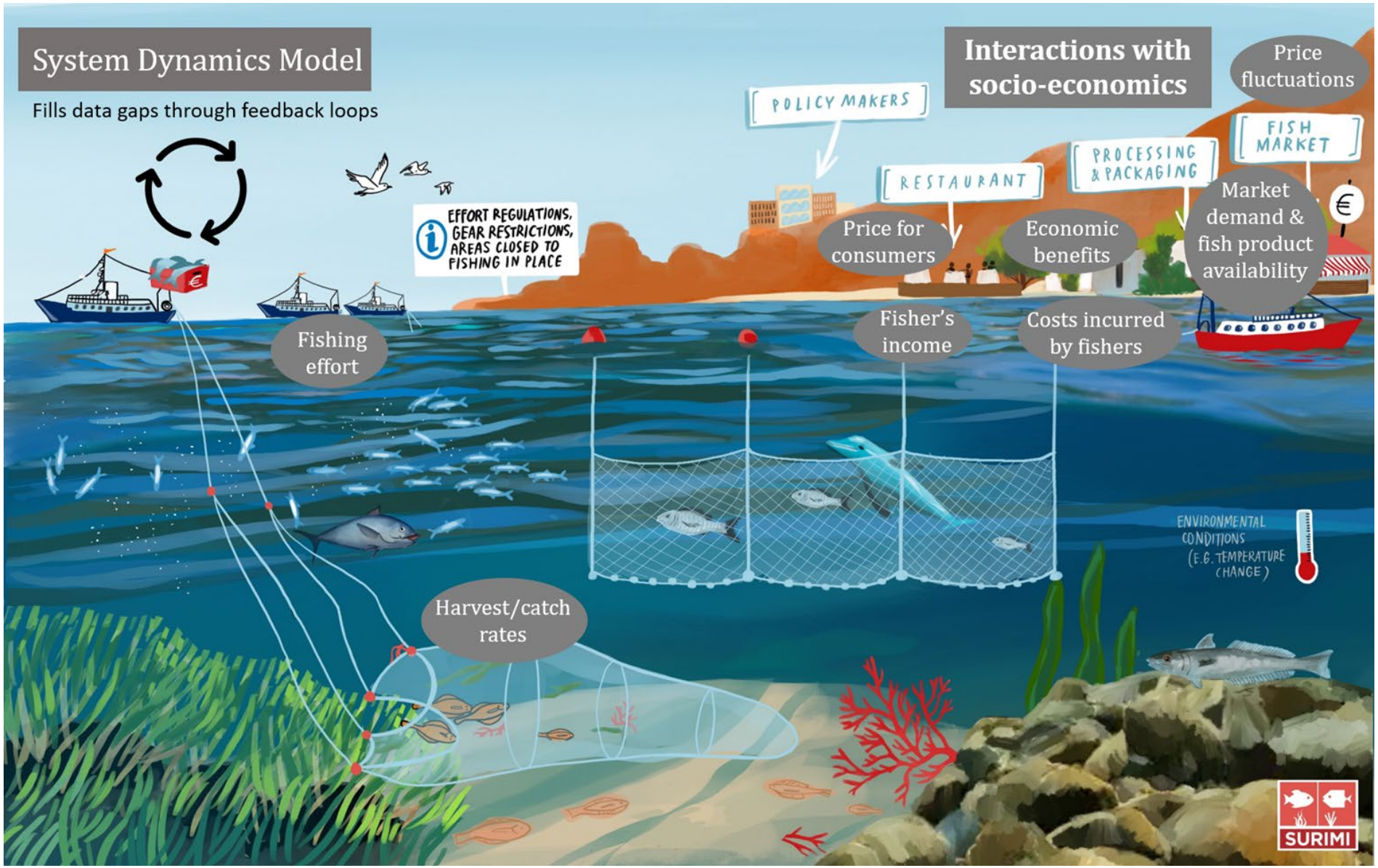
SURIMI

# System Dynamics Model



# Coffee break

We’ll resume at 11:05 CET

# Online tool and feedback session

Introduction to the tool, collecting feedback and Plenary discussion

SURIMI

# SURIMI online tool (visual interface)

## ITS PURPOSE

An interactive tool connecting science with policy, where users may test “what-if” scenarios on fisheries & marine ecosystems.

Translates complex model outputs into clear, visual insights.

## HOW IT WORKS

Runs the previously presented models in sequence.

Displays their results into dashboards (maps, charts).

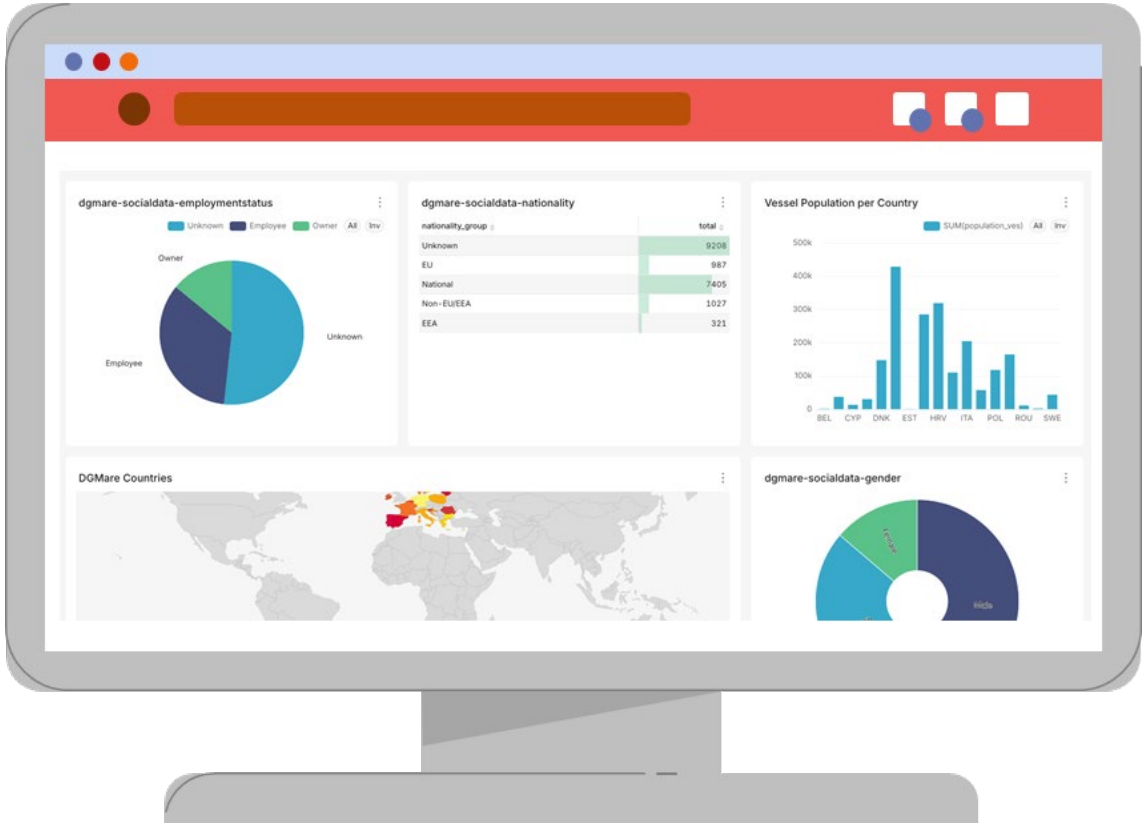
Designed for non-technical users: intuitive,  web-based.

## BENEFITS TO YOU

Compare alternative management or policy strategies.

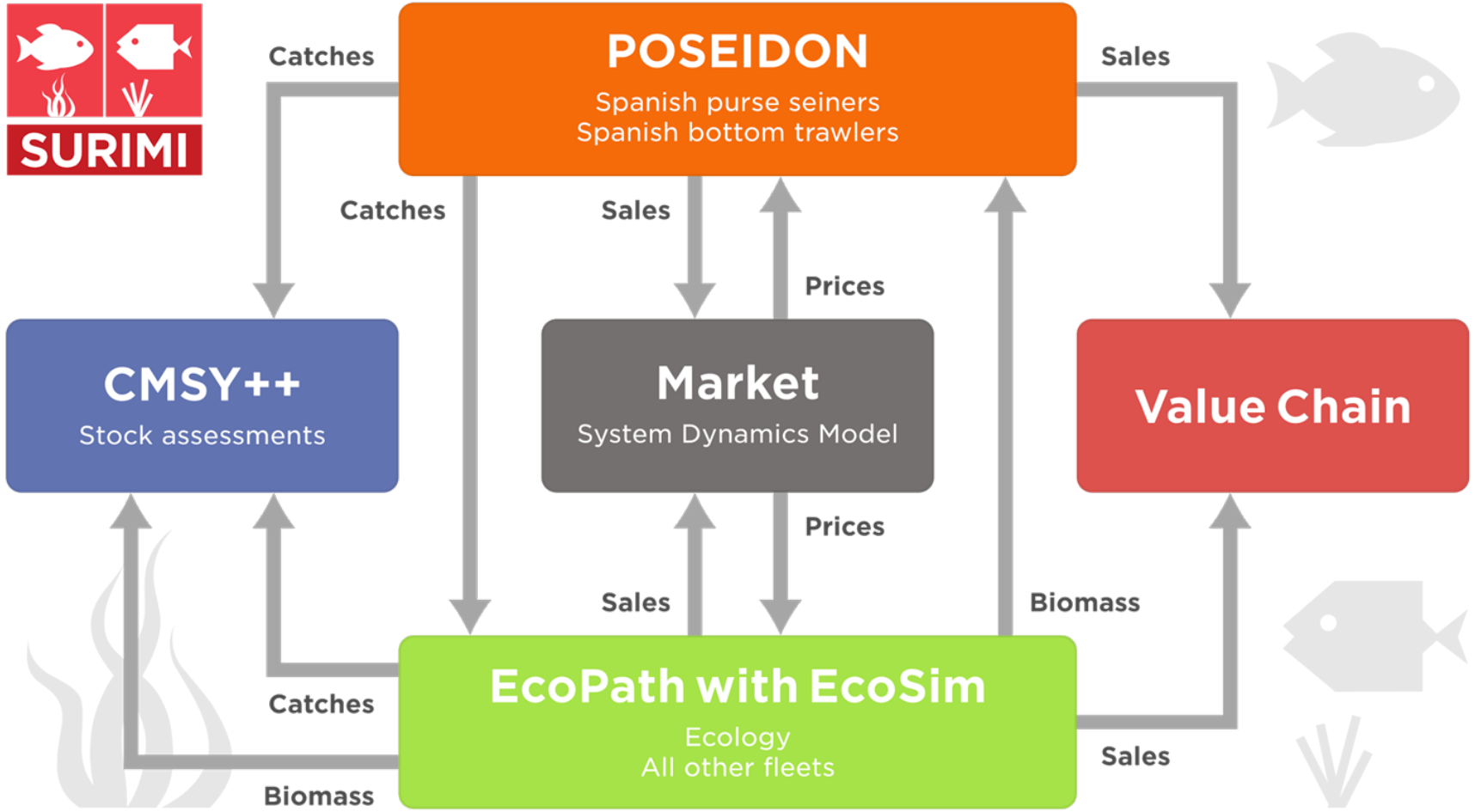
Make **evidence-based decisions** supported by real data.

Strengthen collaboration between **scientists, fishers, and policymakers.**



# SURIMI models will be used in combination

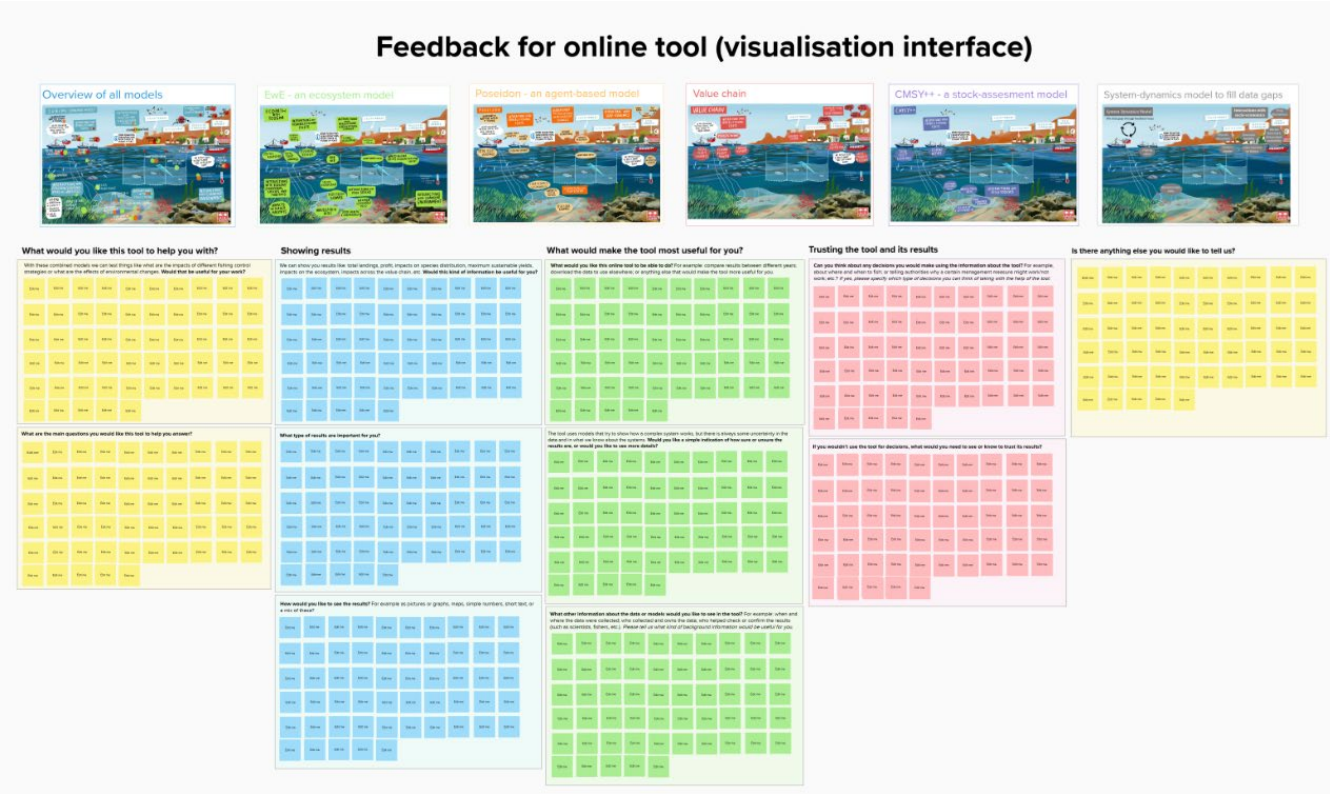
## They will exchange information to increase accuracy of predictions



# Collecting your feedback for the design of the online tool

# Using Mural - an online whiteboard

- 11 questions for feedback
- Use post-it notes to answer
- Murals in English, French and Spanish



# Using Mural

## How to use Mural

1 **Navigate around the mural**
- Click and drag to move the Mural around

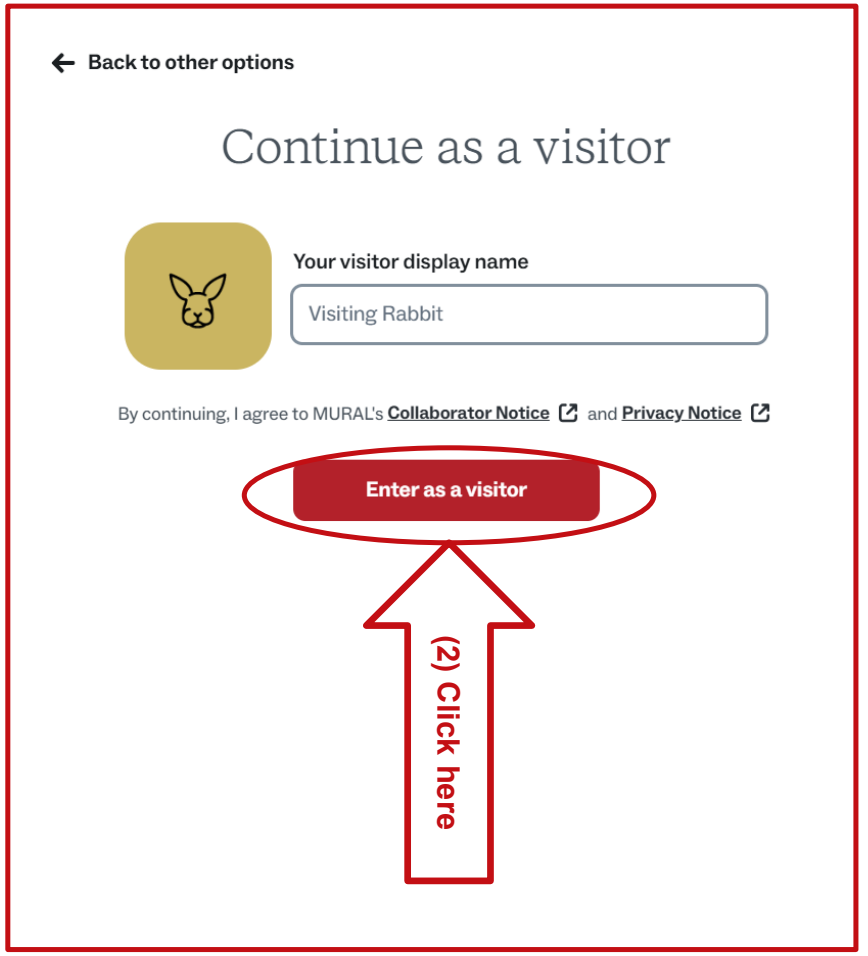
2 **Zoom in and out**
- Use your usual device controls to zoom in and out OR
- Use the icons in the bottom corner of your screen

3 **Edit post-it notes**
- Double click on the post-it note to change the text.
- Copy and paste to create a new one
- Drag them to move them around.
- You cannot edit a post-it note that someone else is editing:

## Ready to try?

Play around. You can't do any harm

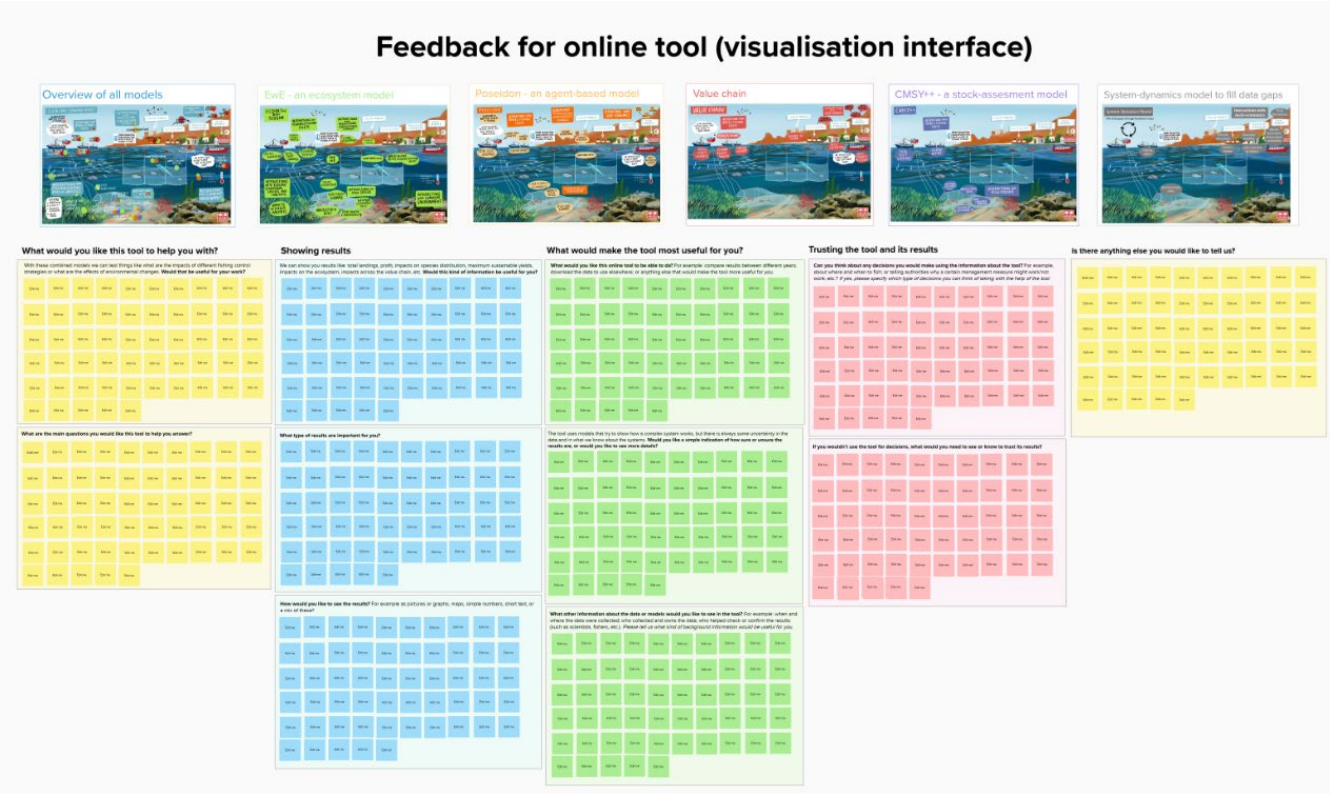
# Entering Mural




**Please go to the zoom chat and open the link provided to access the practice Mural in your preferred language**

# Individual work in Mural

- 30 min individual work followed by Plenary discussion
- Links to Murals in chat
- If you have any questions, please ask us

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# Plenary discussion

# Closing feedback

## Questions:

- Which stakeholder type fits best to you?
- Can you imagine using the SURIMI Toolbox in the future?

- Go to: Slido.com
- Enter code: #SURIMI

# Closing and next steps:

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# Summary & key take-aways

# Next steps

- Sign up to the Stakeholder Forum to keep involved: https://docs.google.com/forms/d/e/1FAIpQLSfFD92s_OUc4Iuk3R_mz8EeP8mOtRL5dHHurmyyE7qB7J6mZw/viewform
  - Sign up via the form (in English)
  - OR send an email (in English/Spanish/French) to me (arodriguez@marineboard.eu) or the AC Secretariats
  - We'll explore how to keep you involved if English language is a barrier
- Next stakeholders workshops (in English):
  - Spring 2026 in Brussels: present a prototype of the Toolbox
  - Spring 2027 in Brussels: present final tools

# Thank you for your valuable contributions!

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