# Economic Report of the EU Aquaculture Sector

## AAC and MAC

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# Outline of presentation

- Background for the data collection for aquaculture in EU
- Content of the report from 2024 (EWG 24-14)
- Special chapters
- Conclusions

# The aim of the data collection under EMFF and EMFAF

- The Common Fisheries Policy (CFP) should ensure that fishing and aquaculture activities contribute to long-term environmental, economic, and social sustainability.

- **Collection and dissemination of aquaculture data is done in order to provide a sound basis for scientific advice in support of the EU Common Fisheries Policy**

# Background

- The data collected are specified by Commission regulation
- Data are reported by Member States on species and production technique
- Important to harmonize the data for comparability (Regional Coordination Group (RCG-ECON))
- Data for the years 2008 to 2022 (Additional data from FAO and EUROSTAT)
- The report and data are published at JRC website

What is collected

The report give a comprehensive overview of the latest information available on production volume, economic value, employment and competitive performance at the national and EU level for the years 2017 to 2022

- Economics – Detailed sales volume, value and cost for aquaculture firms
- Social – Socio-demographics on age, gender, education, nationality
- Environment – ? (not implemented Mortality and Medicine use)

# Contents of the report


**An EU overview chapter presenting the current state**

- Furthermore, the EU sector is divided on
  - Marine finfish (salmon, seabream/seabass, tuna and other species)
  - Shellfish (mussels, oysters, clams and other species)
  - Freshwater (trout, carp and other species)

**Special topics:**

- The economic sustainability indicators
- Nowcast estimation of the overall production value and volume and employment of the EU aquaculture sector for 2023

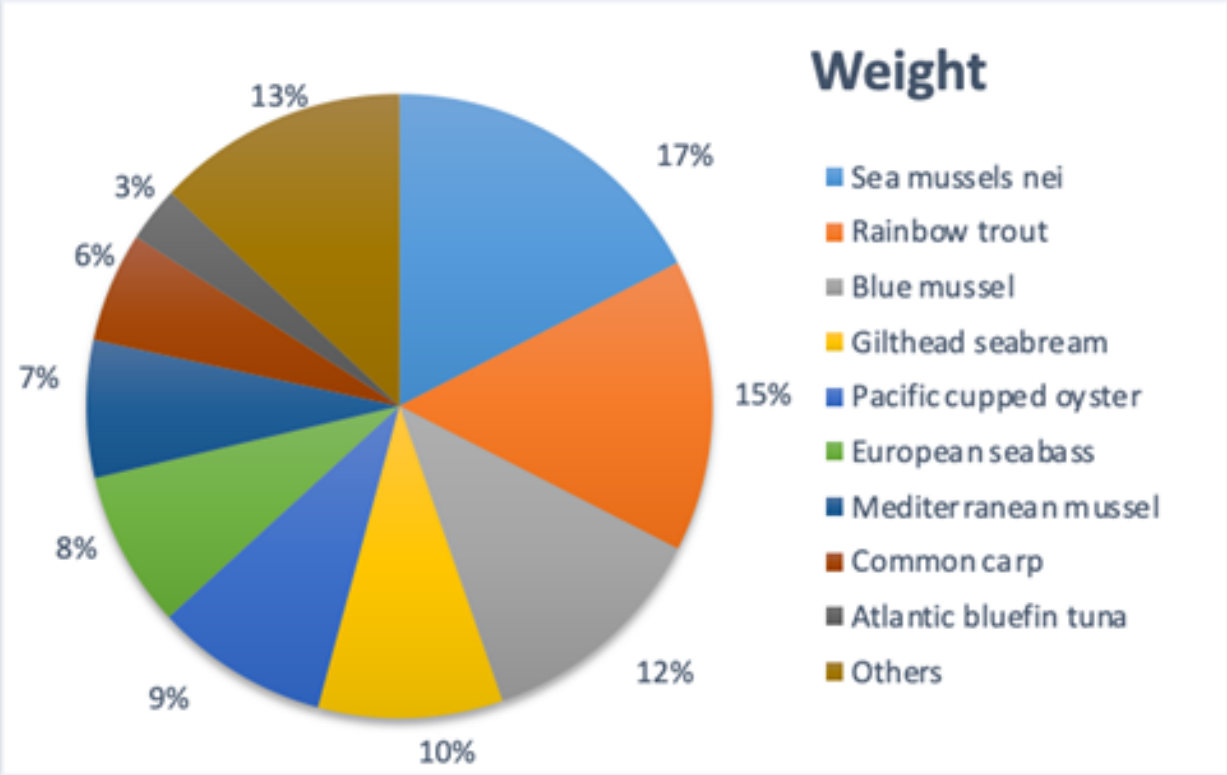
# The EU aquaculture sector in numbers (2022)

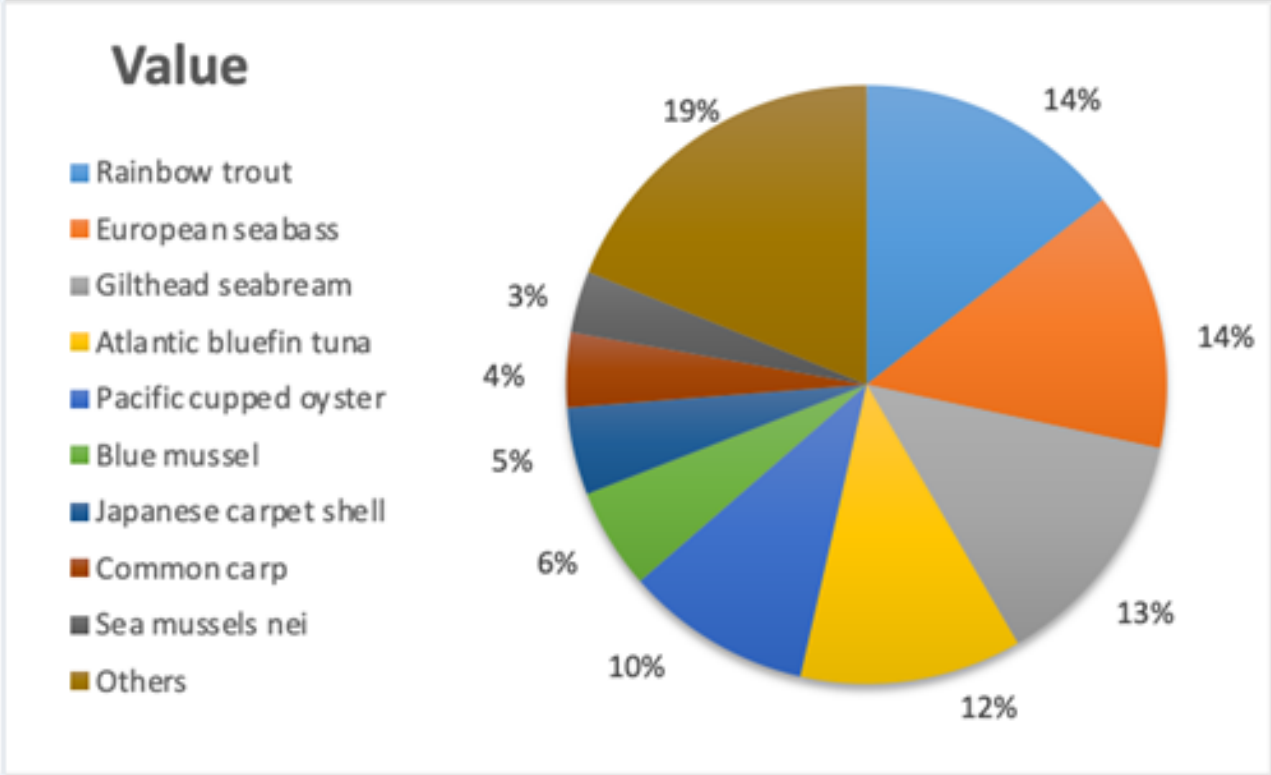
- **14 thousand enterprises** of which **80% are micro-enterprises** (10 employees)
- **73 thousand employees** and **41 thousand full time employees**
- **1.2 million ton is produced, valued at € 4.8 billion**
- **Increase of 5% in volume and 24% in the turnover** compared to 2020.
- Increase of 1% in volume and 15% in turnover compared to 2021

# Main species by weight and value (2022)

**Main species** by **weight** are Mediterranean mussels, trout, blue mussels, seabream, oyster

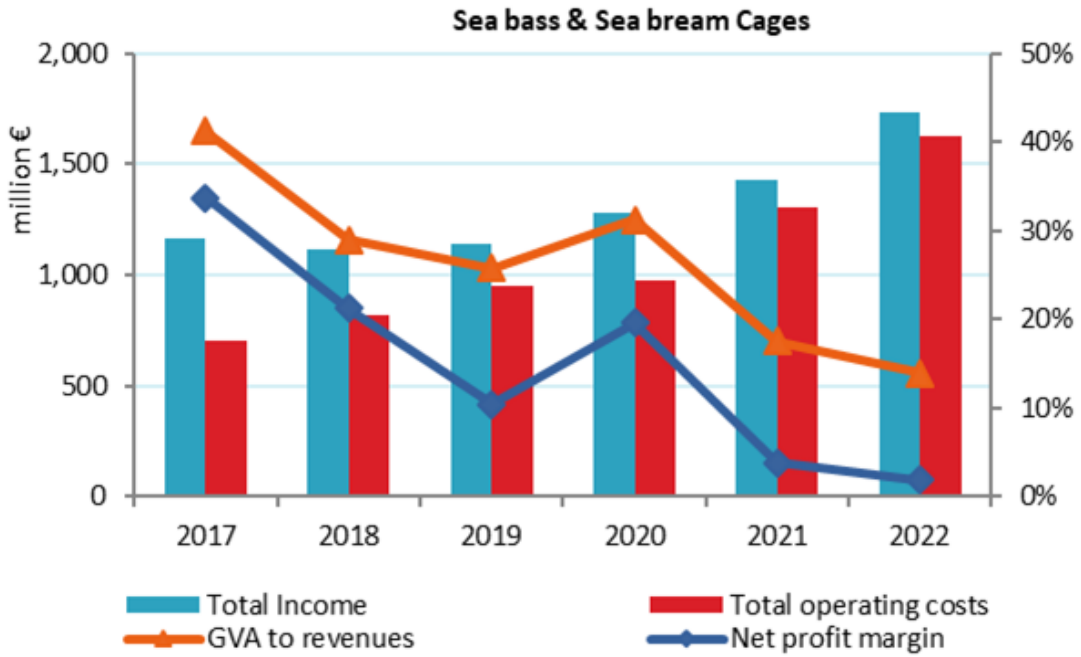
**Main species** by **value** are trout, seabass, seabream, tuna, oysters



# Main results - Marine fish sector 2022

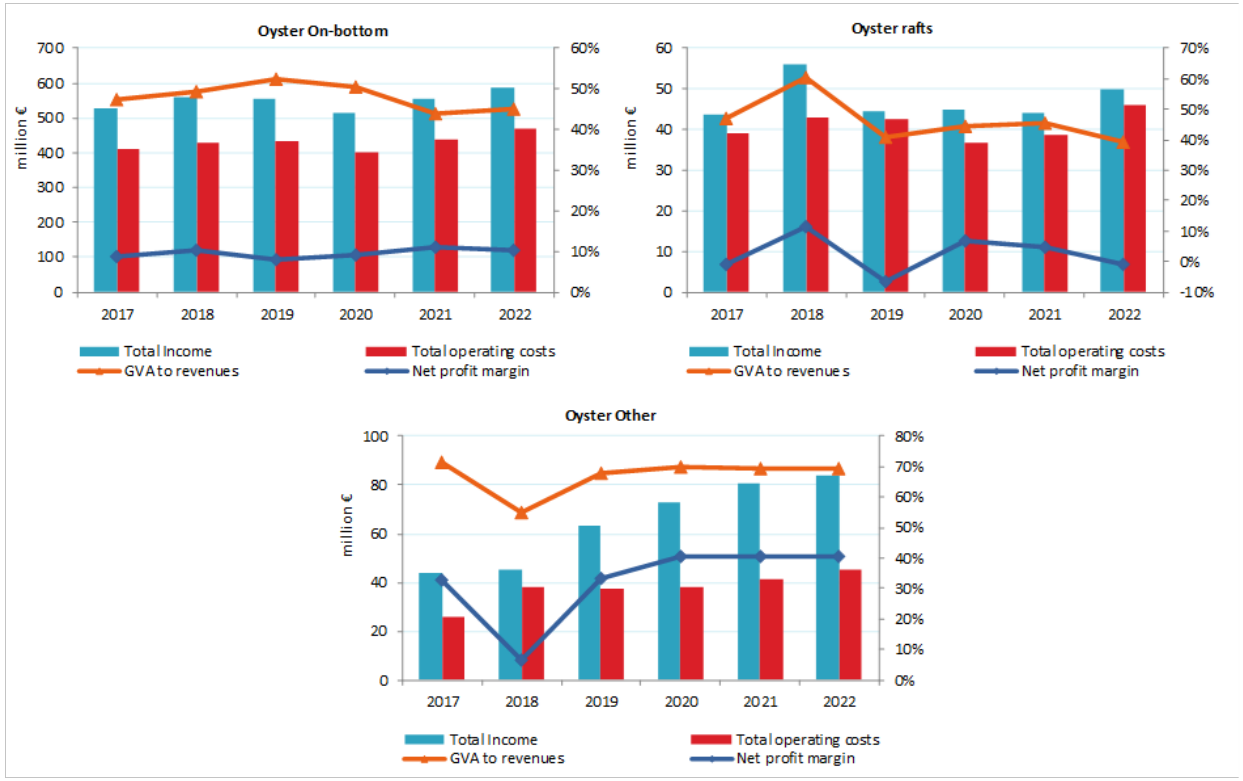
- Marine aquaculture cover 48% of the production in terms of value and 25% of the weight
- Few species - high specialisation. The sector is capital intensive and have large enterprises.
- The largest producer is Greece (seabass/seabream)
- It employs around 9,000 persons in 500 enterprises



# Main results - Shellfish sector 2022

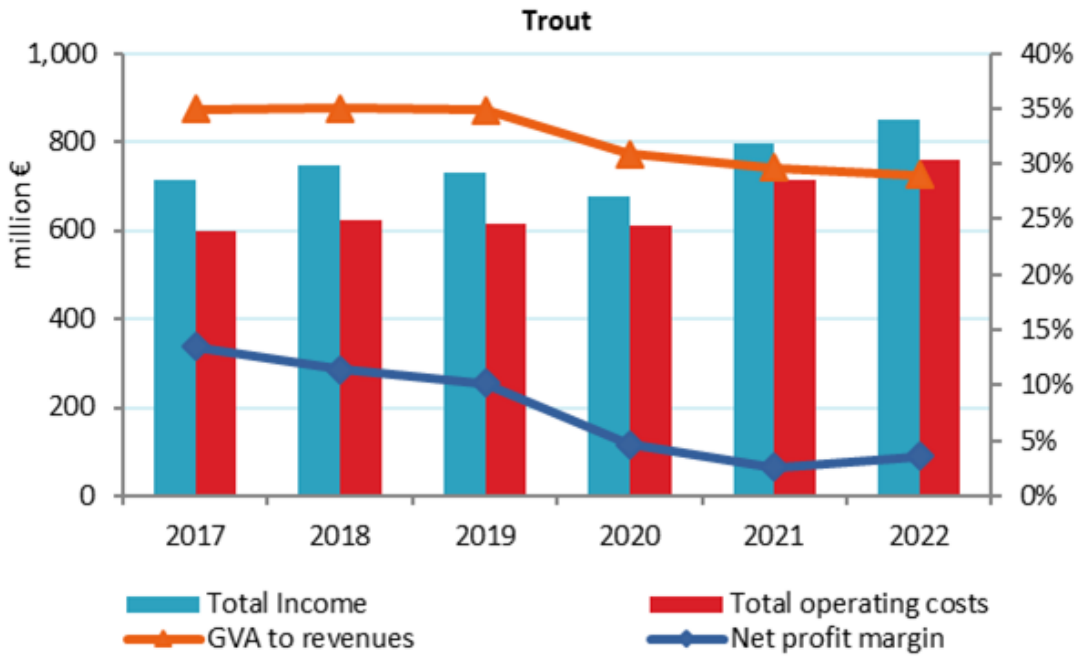
- Shellfish cover 28% in value and 48% in volume.
- Main producers are Spain, France, Portugal and Italy
- Species are Oysters, Mediterranean- and Blue-mussels and Clams
- Dominated by small scale family-owned enterprises

The shellfish sector is important in terms of employment covering 38,000 persons, distributed on 6,500 enterprises



# Main results - Freshwater fish sector 2022

- Freshwater fish contribute 25% of value and 27% in volume.
- Producers are Italy, Denmark, France and Spain
- **Trout** are produced in both intensive and extensive systems
- **Carp** is produced in extensive systems




Small scale family-owned enterprises

- Employment 22,000 persons.
- Around 6,200 enterprise.

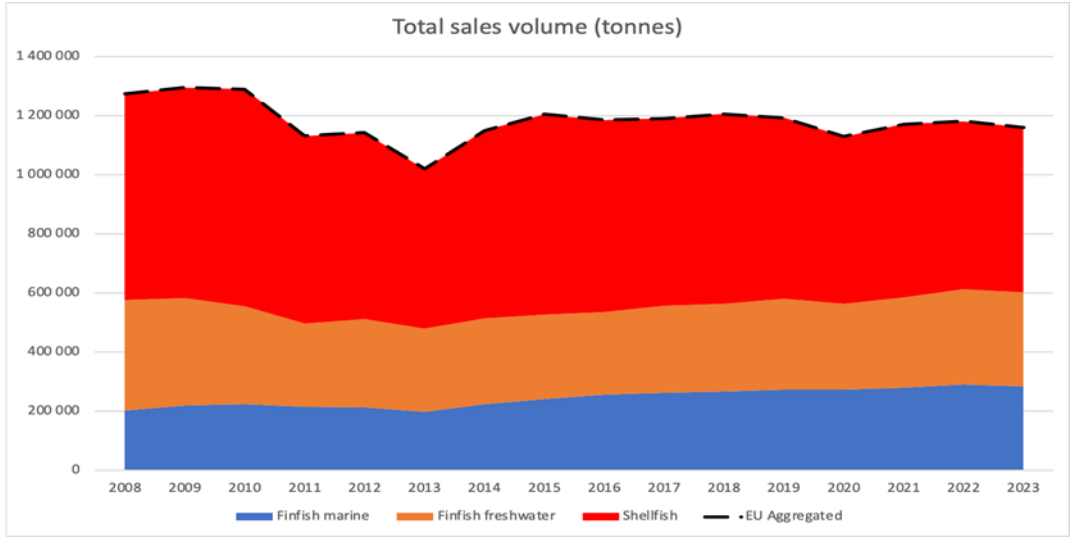
# Special Topics – Nowcast model

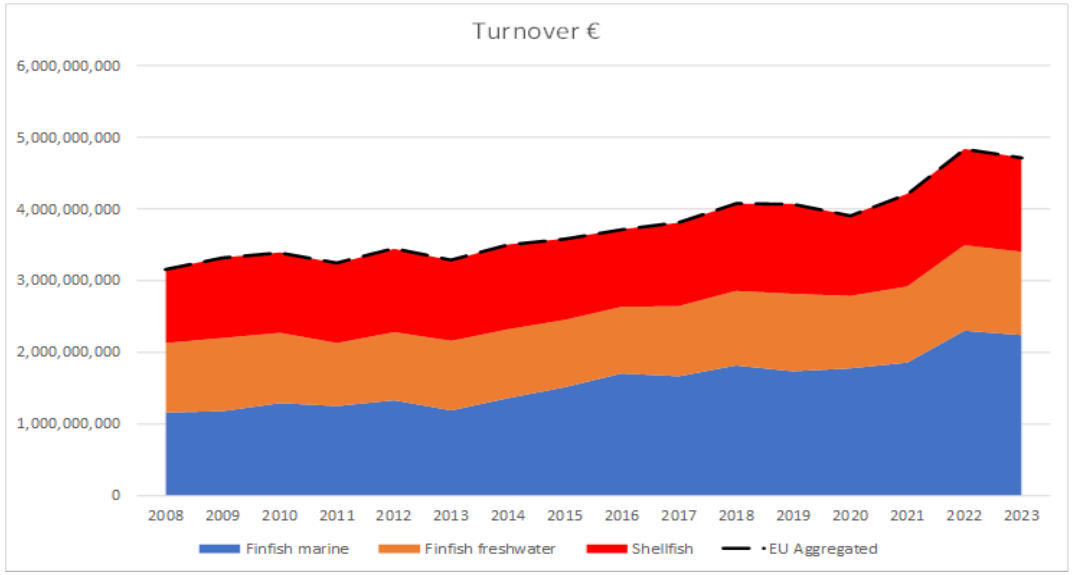
1. The nowcast-model only estimate **production volume** and **value** along with **number of enterprises** and **employment** in the sector

2. Only 2023 is reported (lack of data for 2024)

3. Nowcast estimate for 2023 – volume will decrease 2%, and sales value is stable

4. Estimates for 2021 - within 2% of volume and 5% of sales value



# Special Topics – Economic indicators

## Economic sustainability

- Economic sustainability refers to the ability of an economy or a sector to support a defined level of economic production in the long term.

- Long term resilience requires that industries are able to continuously invest in new technology to stay competitive, and at the same time pay for negative externalities (side effects) imposed on society or from use of natural resources.

- It is closely linked to the other two pillars of sustainability, social and environmental.

# Special Topics – Economic indicators

## Economic sustainability

The variables selected for investigating economic sustainability are:

- **GVA** (Gross value added) – Profit before paying labour and capital
- **EBIT** (Earnings before interest, tax) – Profit after paying labour and capital
- **ROI** (Return on investment) – EBIT/Value of assets
- **FEI** (Future expectation) – Positive amount of investment/Value of assets
- **Labour productivity** – GVA/FTE
- **Capital productivity** – GVA/Value of assets

# Special Topics – Economic indicators

**Economic indicators in The EU aquaculture report**

1. Can be calculated based on reported data
2. All definitions and calculation is shown in the report
3. Can easily be interpretated and compared to other statistics
4. Time series may create problems (DCF/EUMAP)(missing countries)
5. Knowledge on species and segments is important for valid calculations

**Conclusion:** Overall, the EU aquaculture sector seems economically robust!

| Total aquaculture | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2017-22 |
|---|---|---|---|---|---|---|---|
| GVA (€ million) | 1487 | 1431 | 1411 | 1414 | 1589 | 1633 | 10% |
| EBIT (€ million) | 538 | 423 | 364 | 428 | 556 | 522 | -3% |
| ROI (%) | 10% | 7% | 6% | 7% | 8% | 8% | -22% |
| FEI (%) | 3% | 4% | 2% | 2% | 3% | 3% | -4% |
| Labour productivity (thousand €) | 52 | 51 | 47 | 50 | 51 | 48 | -8% |
| Capital productivity (%) | 27% | 25% | 22% | 22% | 23% | 24% | -12% |

# Special Topics – Economic indicators

**Example from the report:**

**Trout all technologies**

- Species and technique
- Start year matters
- Countries included
- More analysis needed to look at longer time series

Sustainable economic indicators of **EU trout aquaculture**: 2017-22.

| New Trout | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Variation |
|---|---|---|---|---|---|---|---|
| GVA (€ million) | 209.7 | 221.3 | 222.0 | 186.9 | 206.1 | 207.6 | -1% |
| EBIT (€ million) | 58.6 | 65.9 | 59.2 | 27.3 | 15.9 | 14.0 | -76% |
| ROI (%) | 8% | 10% | 8% | 4% | 1% | 2% | -79% |
| FEI (%) | 6% | 13% | 8% | 7% | 3% | 3% | -51% |
| Labour productivity (thousand €) | 49.7 | 52.5 | 53.6 | 46.5 | 38.7 | 38.1 | -23% |
| Capital productivity (%) | 30% | 33% | 32% | 27% | 19% | 26% | -14% |

# Special Topics – Economic indicators

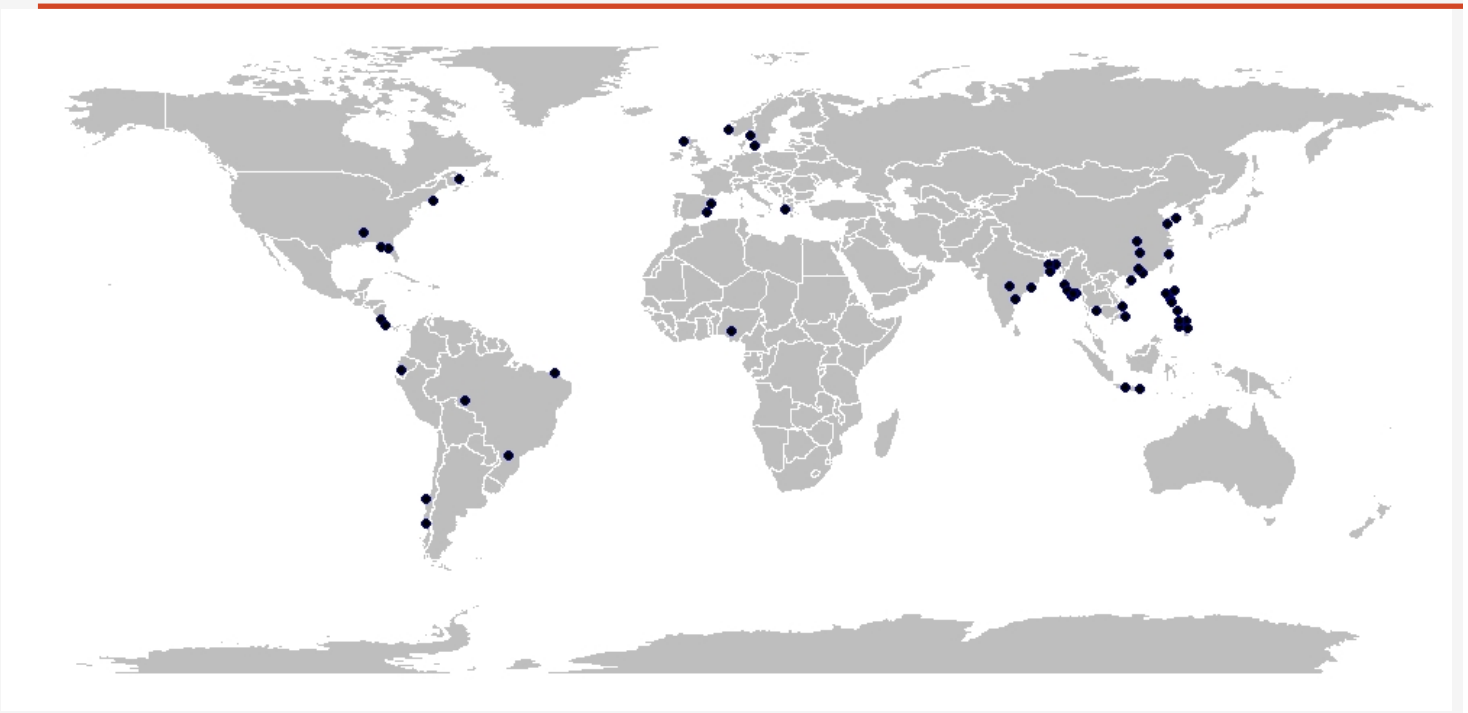
**Economic sustainability**

- New insights on global aquaculture production using the aquaculture performance index show that on average aquaculture production is able to support all three pillars of sustainability simultaneously if managed properly (Garlock et al., 2024).

- To this end, the European aquaculture sector (including UK and Norway) is performing better in all dimensions compared to global averages (Nielsen et al. 2025).

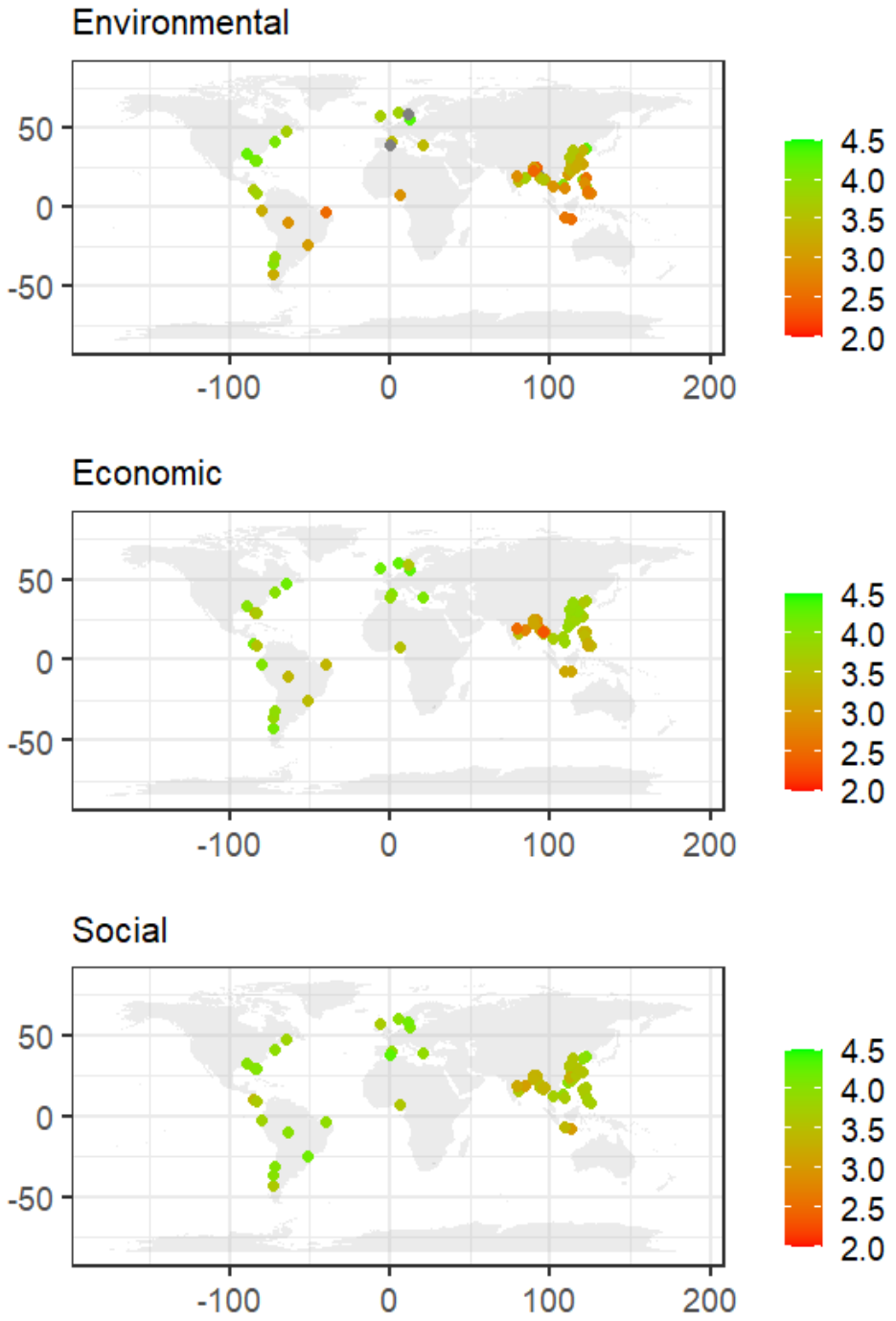
# Special Topics – Economic indicators

## The Aquaculture Performance Indicators (API)



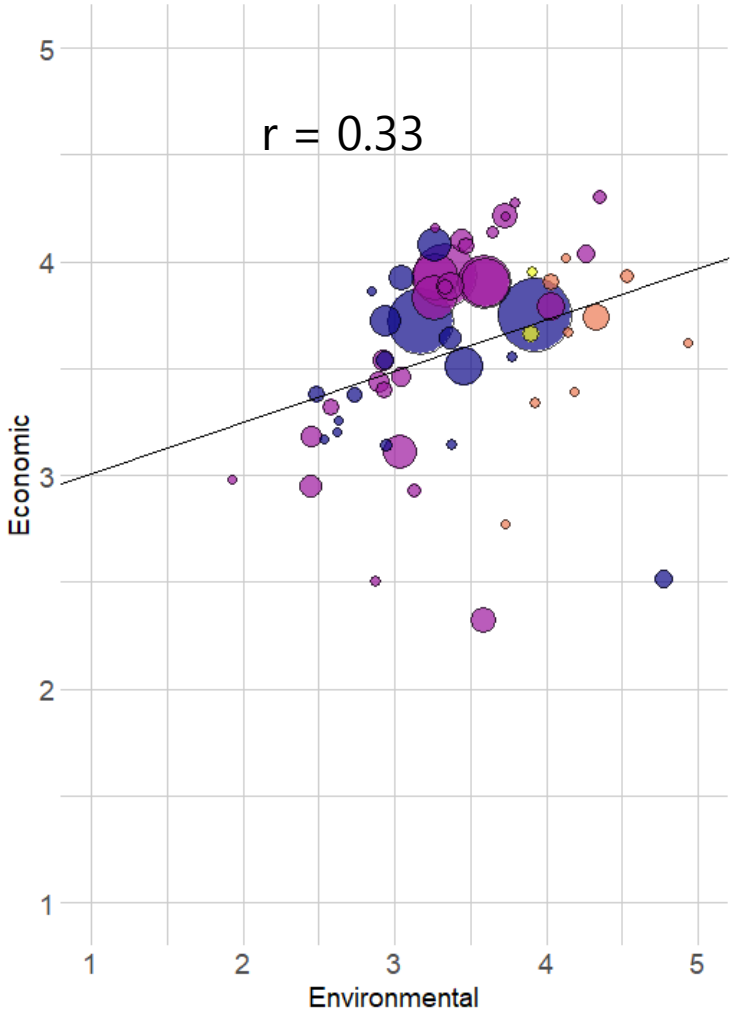
At a global scale, the Aquaculture Performance Indicators, include 58 case studies in 21 countries, representing 91% of global production.

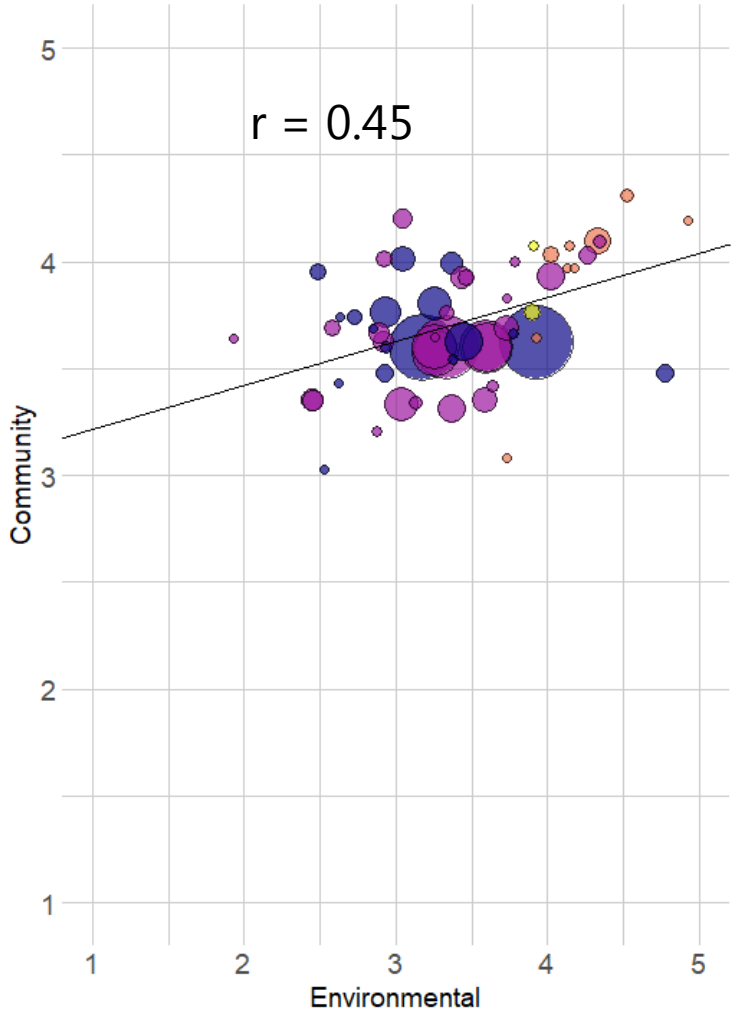
- API have **88 output indicators** that can be aggregated into the **3 pillars of sustainability.**

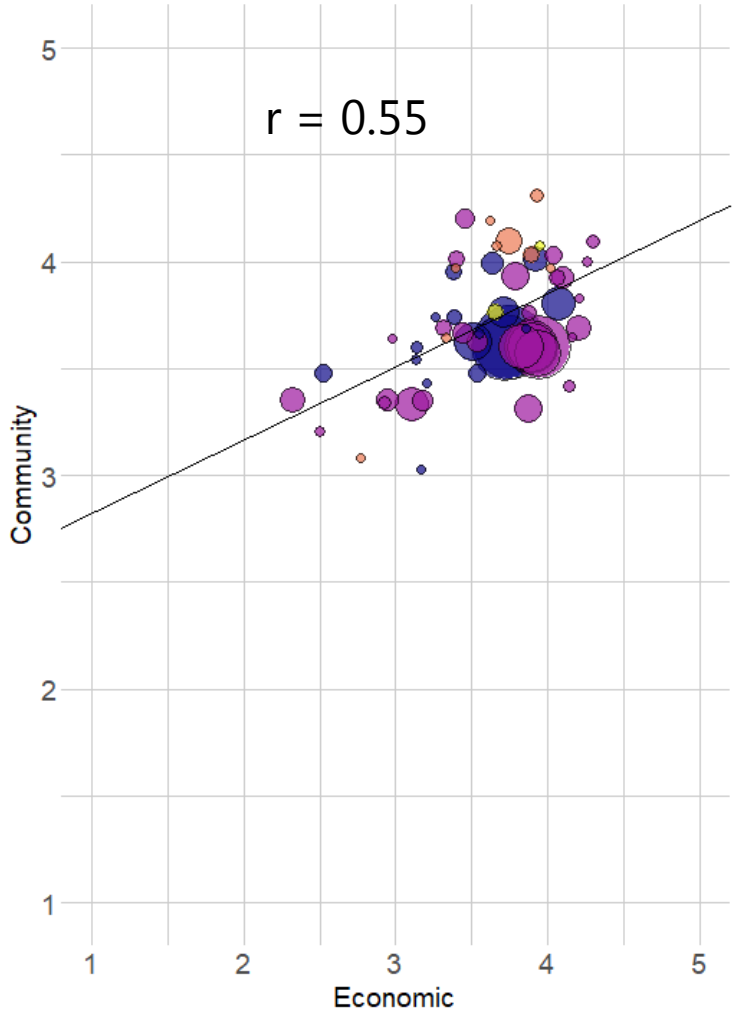


# Special Topics – Economic indicators

## A positive correlation between all three pillars of sustainability



# Special Topics – Economic indicators

**EUROPEAN COURT OF AUDITORS - conclude**

"The allocation of funding was thus mainly demand-driven, with little strategic focus on using funding as a tool to support EU aquaculture policy and the member states' plans for aquaculture."

In the EU Economic Aquaculture report from 2016, the effects of EU subsidies was analyzed and it was concluded.

"It still seems that providing better framework conditions for the aquaculture industry is by far the most important issue to solve - to lay the foundation for future growth in the European aquaculture sector - than providing public funding to individual entrepreneurs."

- **A lot more attention on how subsidies are used is needed**
- **More research on where there are positive effects of using subsidies**
- **More research on identifying and removing barriers to growth in EU**

# Conclusions

**The overall information on the EU sector has improved**

- More freshwater aquaculture covered
- The Nowcast estimations and alternative data sources, allows for bridging data gaps and present time trends

**On the other hand**

- Lack of data control before meetings
- Lack of data experts and correction of data during the meeting decrease time for economic analysis and thereby quality of the report

**Collection of environmental variables** (Mortality and Medicine)?

- Nitrogen and phosphorus instead?

**Cooperation with stakeholders could be improved**

- More expects and observers

# Thank you

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