

Measuring the future success of sustainable blue economy in the Baltic and North Sea

Karoliina Koho

Geological Survey of Finland

karoliina.koho@gtk.fi



Funded by the European Union under Grant Agreement ID 101093845. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.



Workshop plan

1. Opening, *Karoliina Koho, Geological Survey of Finland*
2. Invited speakers – messages from key stakeholder
Marie Hallberg, Analyst, *Swedish Agency for Marine and Water Management*
David Bassett, General Secretary, *EATiP - European Aquaculture Technology & Innovation Platform*
Mattia Cecchinato, Senior Advisor, *Offshore Wind at WindEurope*
3. Measuring Mission Ocean in the BANOS area, *Liisi Lees, University of Tartu*
4. Interactive workshop with all participants – sustainability framework & KPIs for BANOS area
5. Summary (Rapporteurs)



Why to monitor the Mission?

Restore our Ocean and Waters by 2030

Objective 1
Objective 2
Objective 3

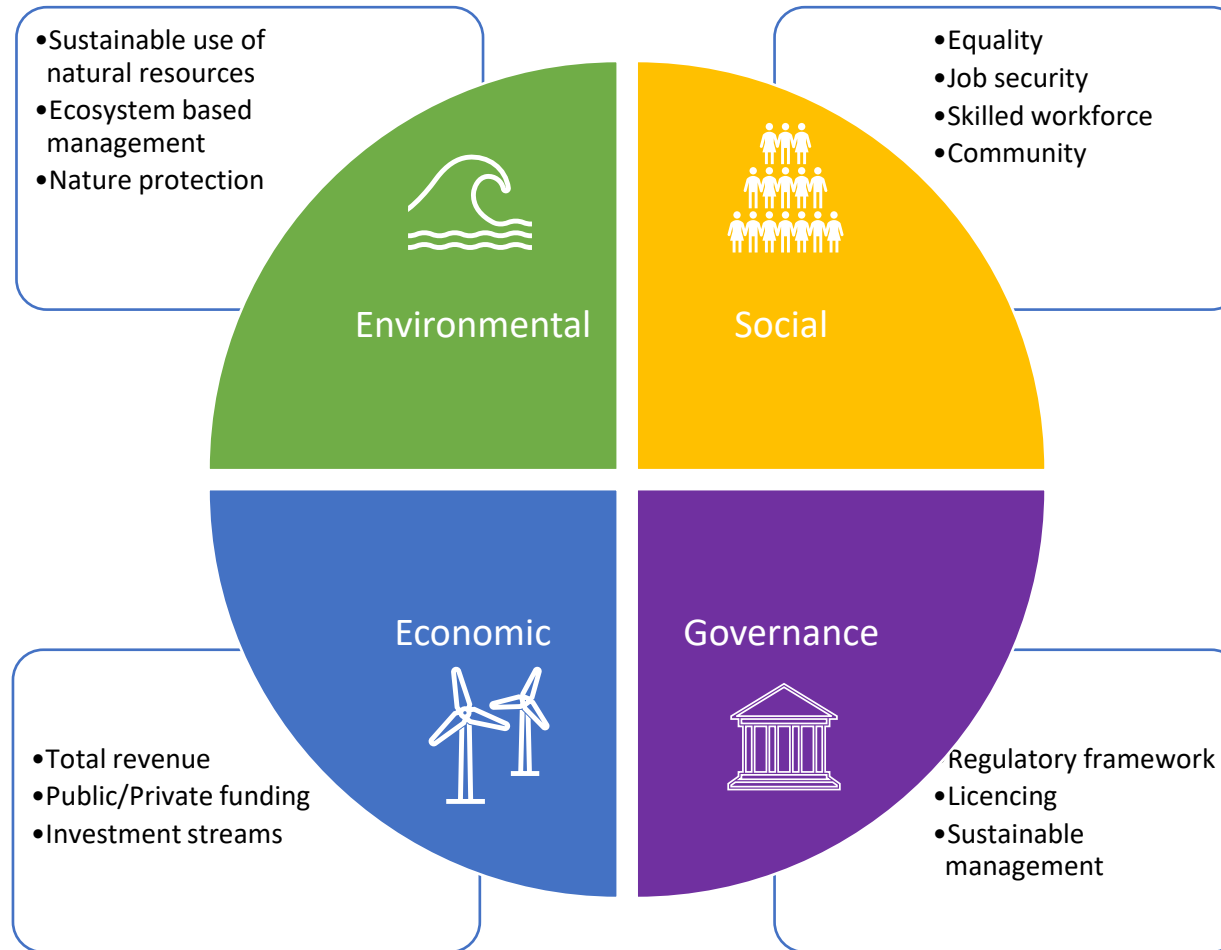
PROTECT AND RESTORE MARINE AND FRESHWATERS ECOSYSTEMS AND BIODIVERSITY	<ul style="list-style-type: none"> • Protect at least 30% and strictly protect 10% EU's sea areas • Restore 25.000 km free flowing rivers • Marine nature restoration targets (incl. degraded seabeds, coastal ecosystems)
PREVENT AND ELIMINATE POLLUTION OF OUR OCEANS, SEAS AND WATERS	<ul style="list-style-type: none"> • Reduce by at least 50% plastic litter • Reduce by at least 30% microplastics • Reduce by at least 50% nutrient losses, chemical pesticides
MAKE THE BLUE ECONOMY CARBON- NEUTRAL AND CIRCULAR	<ul style="list-style-type: none"> • Net zero maritime emissions • Zero carbon aquaculture, • Low carbon multipurpose use of marine space <p>Baltic & North Sea basin</p>

ENABLERS

Digital Ocean and Waters Knowledge system

Public mobilization and engagement

How to measure sustainable blue economy?



SLIDO QUESTION 1

GO TO www.slido.com & ENTER CODE **4079259**

Which sustainability aspect is most important to focus on right now for developing monitoring framework of sustainable blue economy?

- Environment
- Social
- Governance
- Economy



SLIDO QR

Mission Arena of Blue Mission Banos

Measuring the future success of sustainable blue economy in the Baltic and North Sea – Experience from Sweden

**Swedish Agency
for Marine and
Water Management**



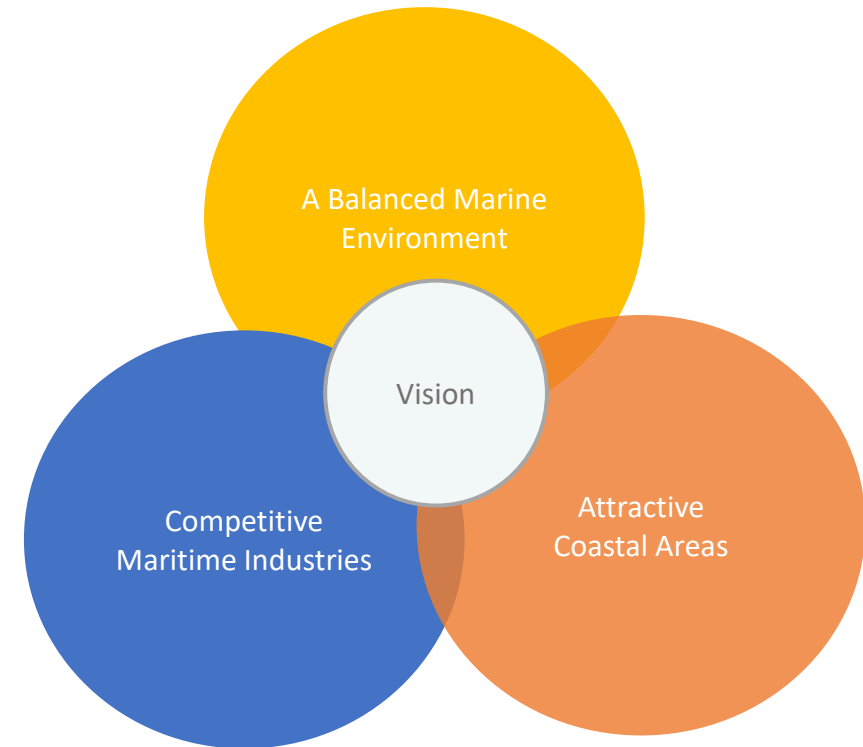
Marie Hallberg

2023-11-16

The Swedish Maritime Strategy - for People, Jobs and the Environment (2015)

"Competitive, innovative and sustainable maritime industries that can contribute to increased employment, reduced environmental impact and an attractive living environment"

- The Swedish Maritime Strategy - for people, jobs and the environment
 - Adopted by the Swedish government in 2015
 - One vision, three perspective, six areas of action
 - Corresponds to Agenda 2030 and the Sustainable Development Goals balance the three dimensions of sustainable development: the economic, social and environmental, integrated and indivisible.

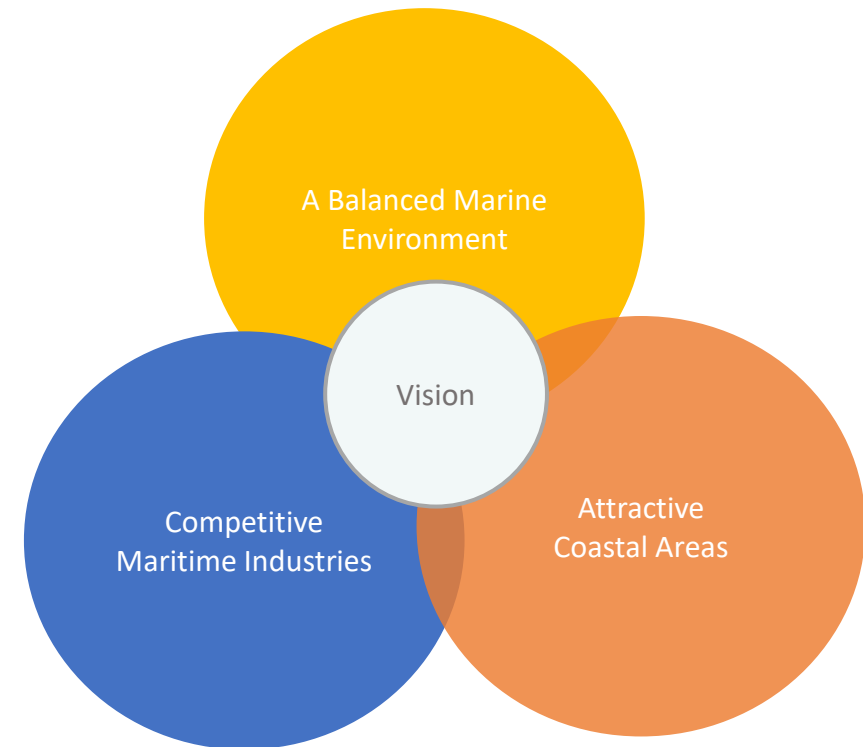


The Swedish Maritime Strategy - for People, Jobs and the Environment (2015)

Swedish Agency
for Marine and
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"Competitive, innovative and sustainable maritime industries that can contribute to increased employment, reduced environmental impact and an attractive living environment"

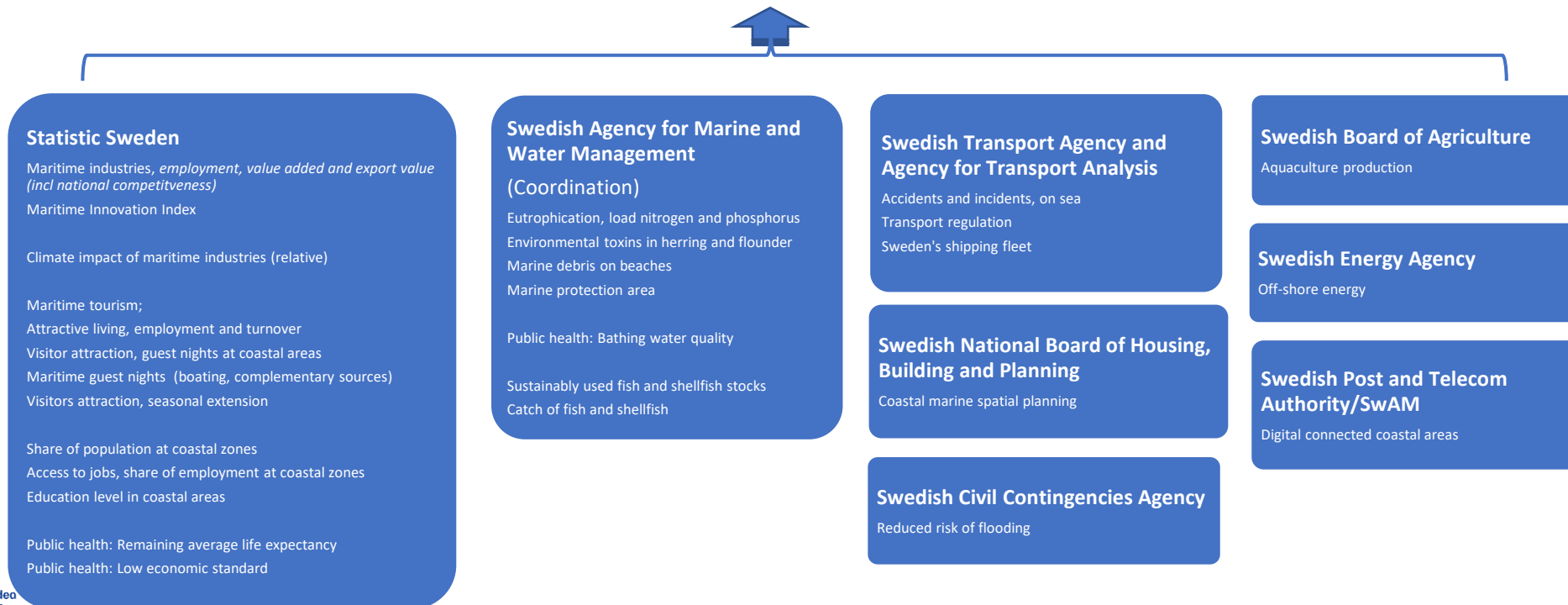
- The Swedish Maritime Strategy - for people, jobs and the environment
 - Assignment to agencies, framework for follow-up by indicators
 - Totally 28 indicators, mostly based on existing indicators and data
 - Time series from 2014 and 2021
 - Involves several Governmental authorities and sources of data



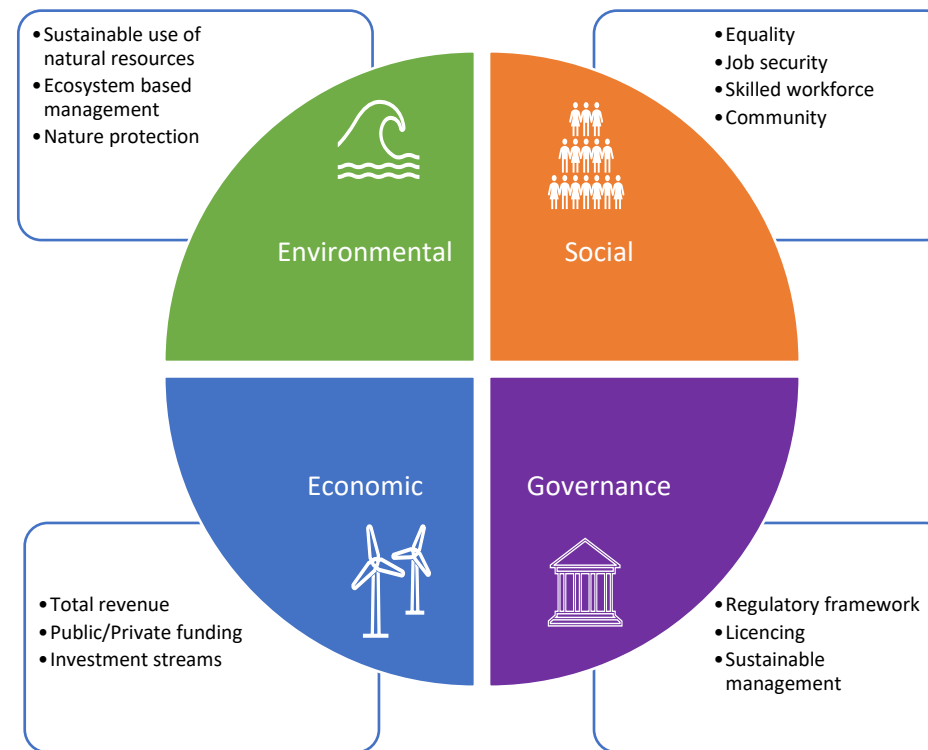
Indicators and follow-up of the Swedish Maritime Strategy

Follow-up Indicators of the Swedish Maritime Strategy

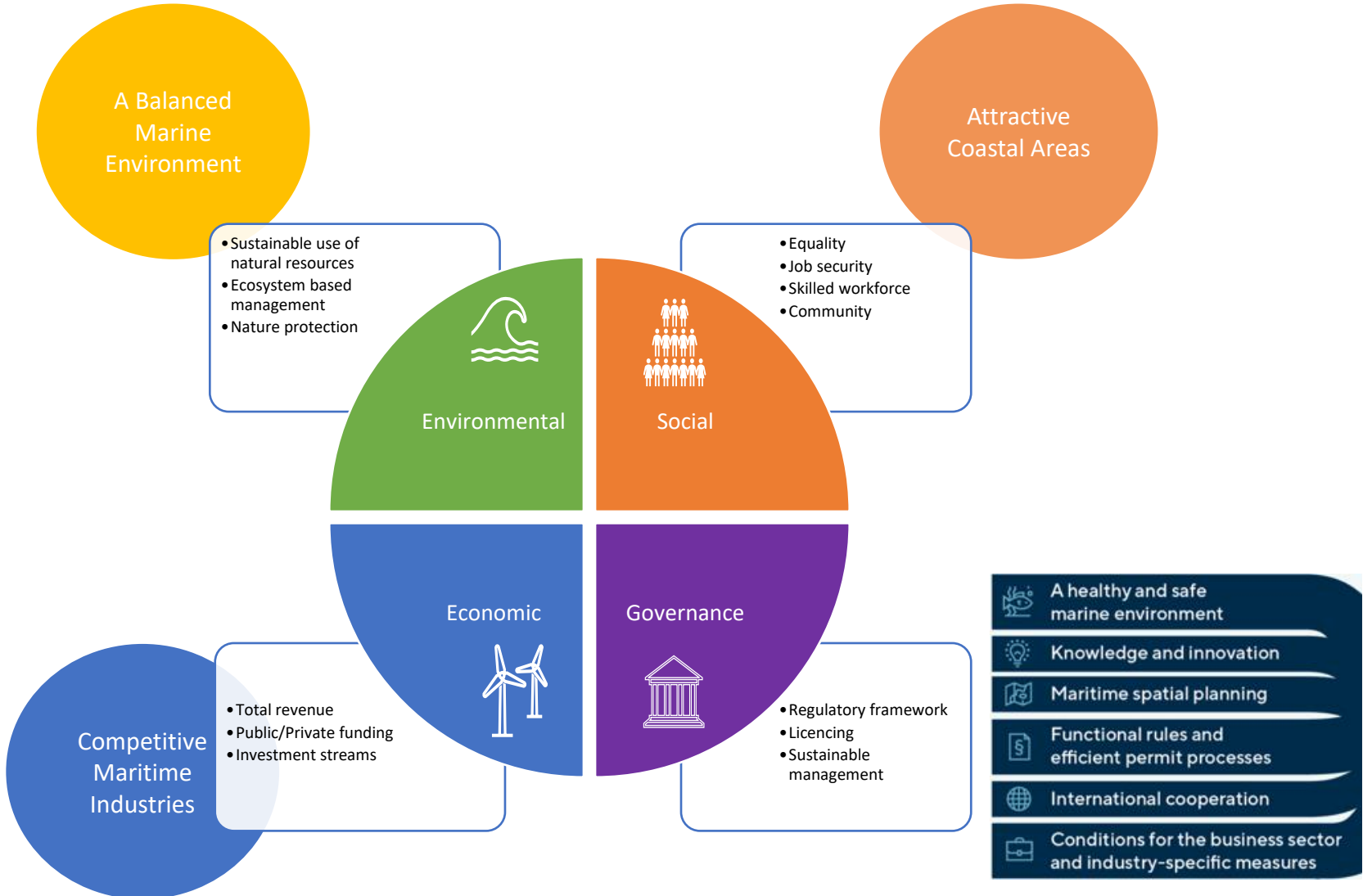
Indicators, Data sources and Analysis (Governmental Agencies)



Sustainability Framework related to indicators of the strategy



Sustainability Framework related to indicators of the strategy



Sustainability Framework related to indicators of the strategy, and objectives

Restore our Ocean and Waters by 2030” objectives:

1. Protect and restore marine and freshwater ecosystems and biodiversity, in line with the EU Biodiversity Strategy 2030

A Balanced Marine Environment

- Eutrophication, nitrogen and phosphorus load
- Environmental toxins in herring and flounder
- Sustainably used stock fish and shellfish
- Public health: Bathing water quality
- Marine debris on beaches
- Reduced risk of flooding
- Climate impact of maritime industries
- Coastal marine spatial planning
- Marine protection area
- Accidents and incidents, on sea

A Balanced
Marine
Environment

- Sustainable use of natural resources
- Ecosystem based management
- Nature protection

Environmental

- Equality
- Job security
- Skilled workforce
- Community

Social

- Total revenue
- Public/Private funding
- Investment streams

Economic

- Regulatory framework
- Licencing
- Sustainable management

Governance

- A healthy and safe marine environment
- Knowledge and innovation
- Maritime spatial planning
- Functional rules and efficient permit processes
- International cooperation
- Conditions for the business sector and industry-specific measures

Sustainability Framework related to indicators of the strategy, and objectives

Swedish Agency
for Marine and
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Environmental

Attractive
Coastal Areas

Attractive coastal areas

- Share of population at coastal zones
- Share of employment at coastal zones
- Education level in coastal areas
- Public health: Remaining average life expectancy
- Public health: Low economic standard
- Maritime tourism, *employment and turnover*
- Visitor attraction, guest nights at coastal areas
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- Visitors, seasonal extension

- Equality
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- Community

Social

Competitive Maritime industries

- Maritime industries, *employment, value added and export value*
- National relative competitiveness of industries, *employment, value added and export*
- Maritime Innovation Index
- Transport regulation
- Sweden's shipping fleet
- Off-shore energy
- Catch of fish and shellfish
- Aquaculture production (volume)
- Digital connected coastal areas

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- Total revenue
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Prevent and eliminate pollution of our ocean, seas and waters, in line with the EU Action Plan Towards Zero Pollution for Air, Water and Soil

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Sustainability Framework related to indicators of the strategy, and objectives

Swedish Agency
for Marine and
Water Management

Restore our Ocean and Waters by 2030” objectives:
Make the sustainable blue economy carbon-neutral and circular, in line with the proposed European Climate Law and the holistic vision enshrined in the Sustainable Blue Economy Strategy.

A Balanced Marine Environment

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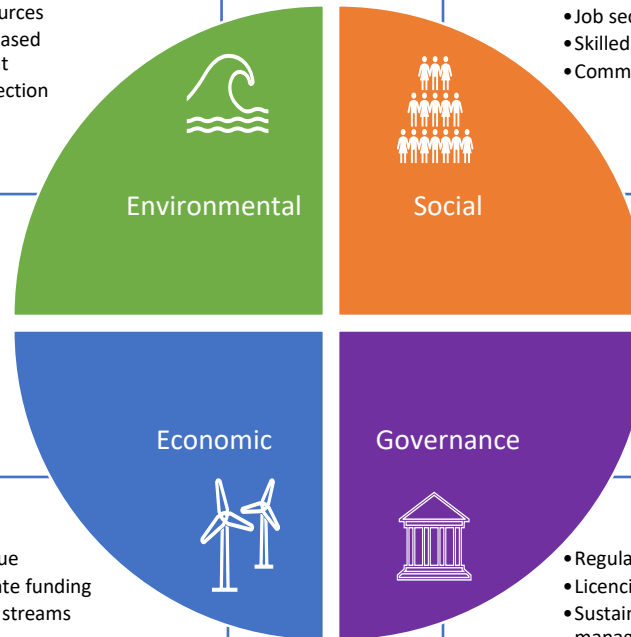
Competitive Maritime Industries

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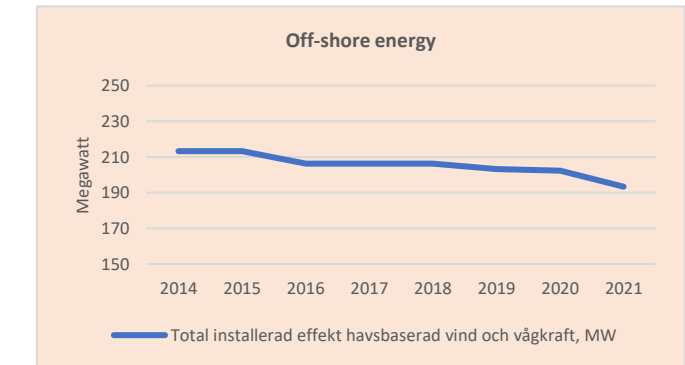
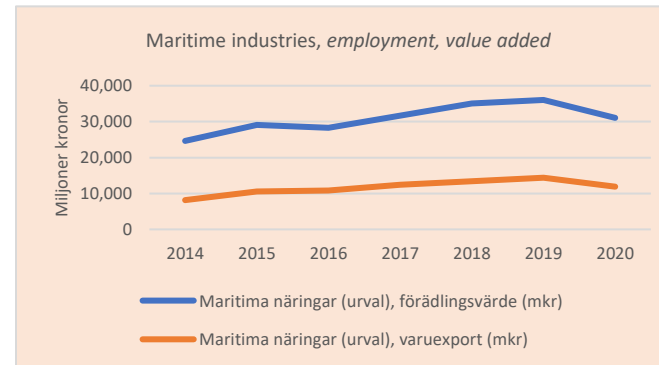
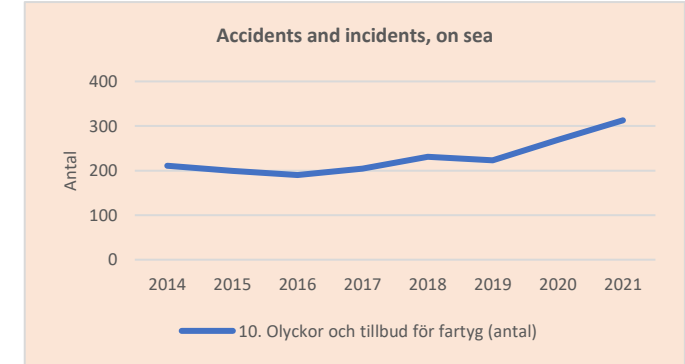
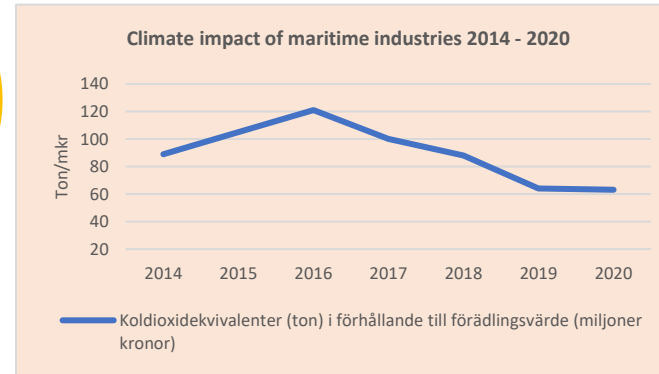
Follow-up indicators, example related to objective and waterborne transport and

A Balanced Marine Environment

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- Public health: Bathing water quality
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- Climate impact of maritime industries (relative)
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Off-shore energy

A Balanced
Marine
Environment



Competitive Maritime industries

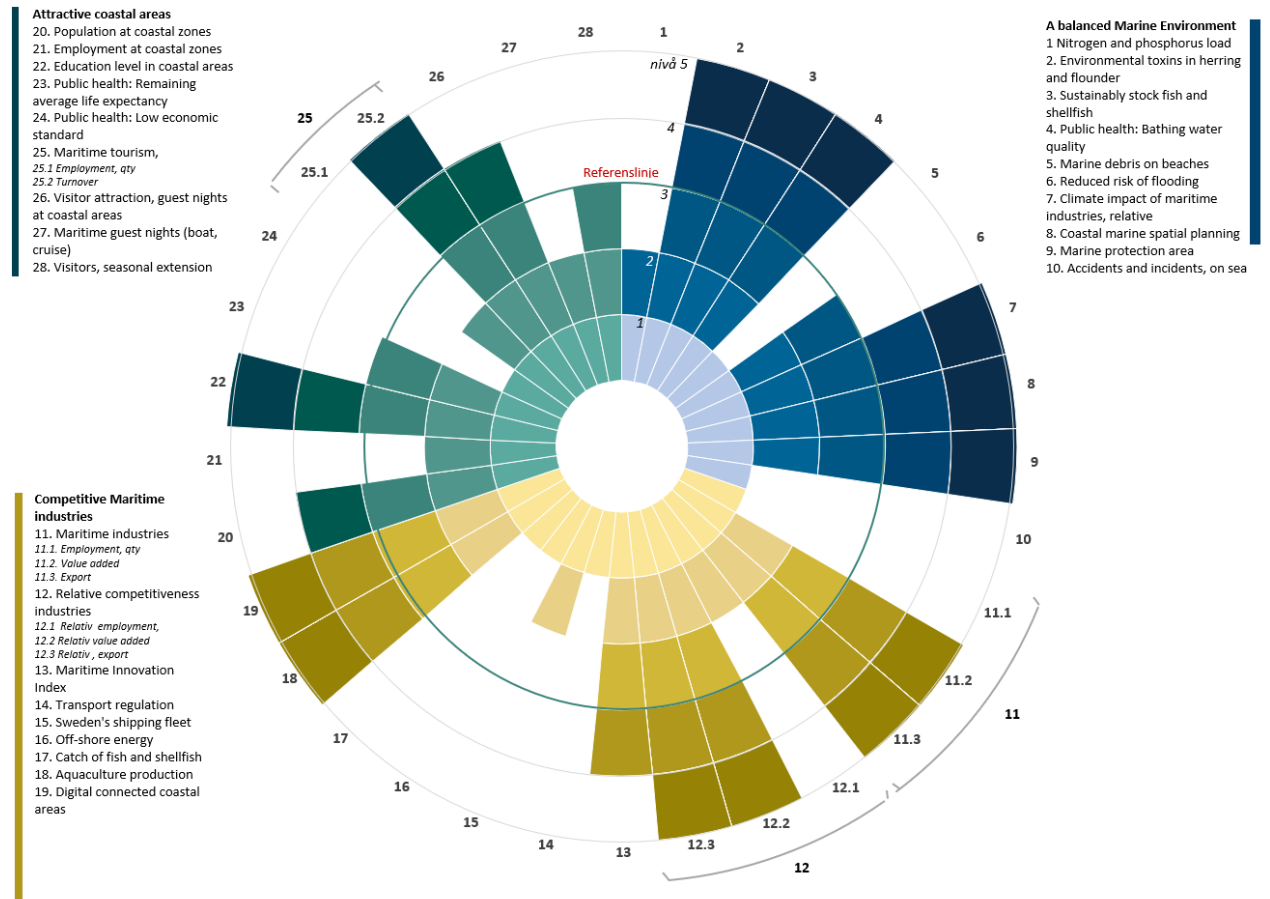
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- Digital connected coastal areas

Competitive
Maritime
Industries

Follow-up Indicators of the Swedish Maritime Strategy

Final remarks

- Holistic and integrated
- Aim for collaboration between sectors and stakeholder
- Specific, Measurable, Attainable, Relevant, Time bound Indicators, add communicative
- Keep it simple, aim for existing, accessible data



Thank You!

**Swedish Agency
for Marine and
Water Management**



Funded by
the European Union



European Aquaculture
Technology and Innovation Platform

Measuring the future success of sustainable blue economy in the Baltic and North Sea.

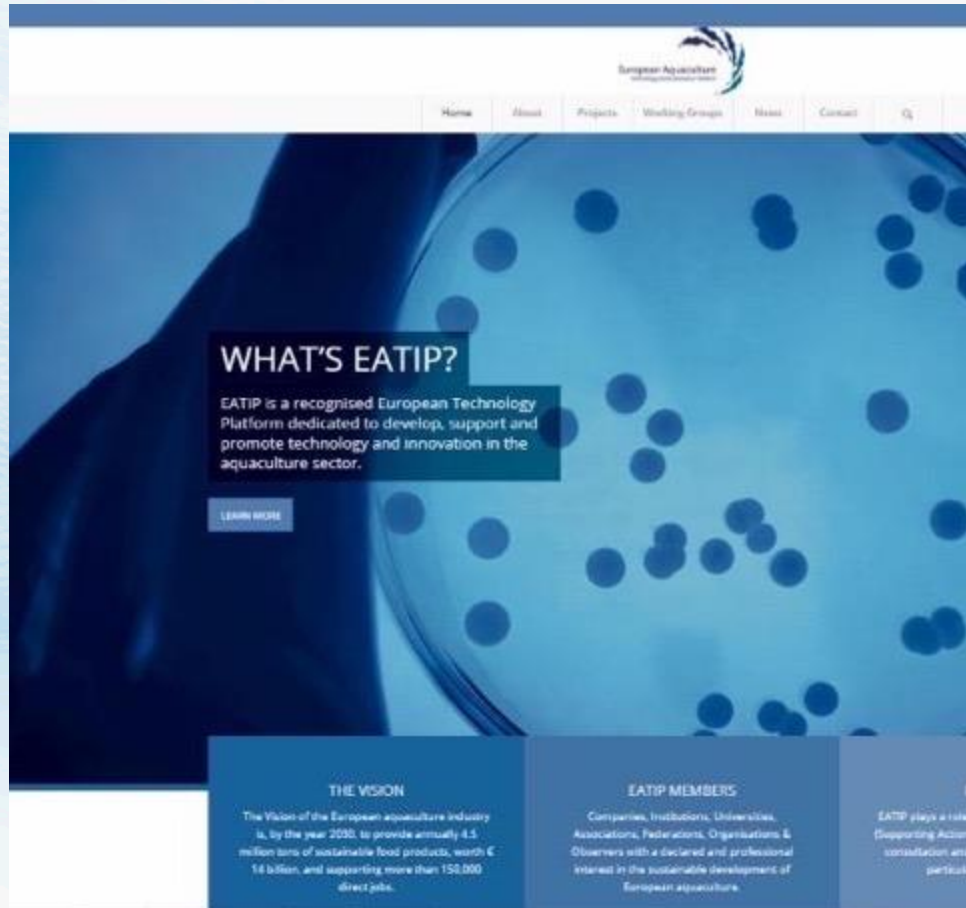
EU Mission Ocean: First Mission Arena

David Bassett – EATiP, General Secretary

david@eatip.eu

14 – 16 November 2023

What is EATiP?



- One of 39 ETPs
- Established 2008
- Registered in BE / governed by statute.
- ASBL (Not for profit)
- Membership funded
- Multi Stakeholder
- Industry led
- Finfish, Shellfish, Algae
- Marine, FW, RAS

➤ SRIA & Recommendations

➤ www.eatip.eu / @eatip_eu

Strategic Research for European Aquaculture:

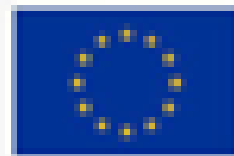


Supporting the promotion of circular, low impact, carbon neutral aquaculture



HE support of research relating to offshore, RAS, organic and IMTA production

Research frameworks & research projects:



European Strategic Support:



A screenshot of the European Maritime Spatial Planning Platform website. The header includes the European Commission logo and a search bar. The main navigation menu has items like "MSP in the EU", "MSP Resources", "MSP Initiatives", "Stay Informed", "About & Contact", and "European Blue Forum". The main content area features a blue banner with the text "The European Maritime Spatial Planning Platform" and "A service for Member States to share relevant knowledge and experiences on Maritime Spatial Planning (MSP)". Below this is a section titled "New MSP Deliverables" with a sub-heading "D.2.1 Analysis of Green Deal aspects in national MSP and D.5.2 Communicating aspects of the Green Deal" and a yellow "Access here" button.

A screenshot of the Maritime Forum website. The header includes the European Commission logo and a search bar. The main navigation menu has items like "Home", "Communities", "Theme", "News & Events". The main content area features a blue banner with the text "Maritime Forum" and a large image of a coastal landscape with a lighthouse. Below the image is a "Maritime Forum" button.

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A screenshot of the Aquaculture Assistance Mechanism website. The header includes the European Commission logo and a search bar. The main navigation menu has items like "Home", "Country info", "Events", "Funding", "Media", "Contact & FAQ". The main content area features a blue banner with the text "Aquaculture Assistance Mechanism" and "The Aquaculture Assistance Mechanism supports the EU Member States, the industry, and other relevant stakeholders in implementing the guidelines for a more sustainable and competitive EU aquaculture". Below the banner is a yellow "Read our Strategic guidelines" button.

A screenshot of the EU4Algae website. The main content area features a blue banner with the text "EU4Algae" and a large image of green algae.

A screenshot of the "About us" page of the Aquaculture Assistance Mechanism website. The main content area features a blue banner with the text "About us" and "The EU Aquaculture Assistance Mechanism is a service to share relevant knowledge, opportunities and experiences on EU Aquaculture. Get more info on the EU Aquaculture and the EU Assistance Mechanism." Below the banner is a yellow "More information about us" button.

Contact info

 secretariat@eatip.eu
Tel: +32 (0) 4 338 29 95

 EATIP ASBL
Square de la Paix 28, B-4031 Liège, Belgium

 <http://eatip.eu/>

 https://twitter.com/eatip_eu

 <https://www.linkedin.com/company/eatip/about/>

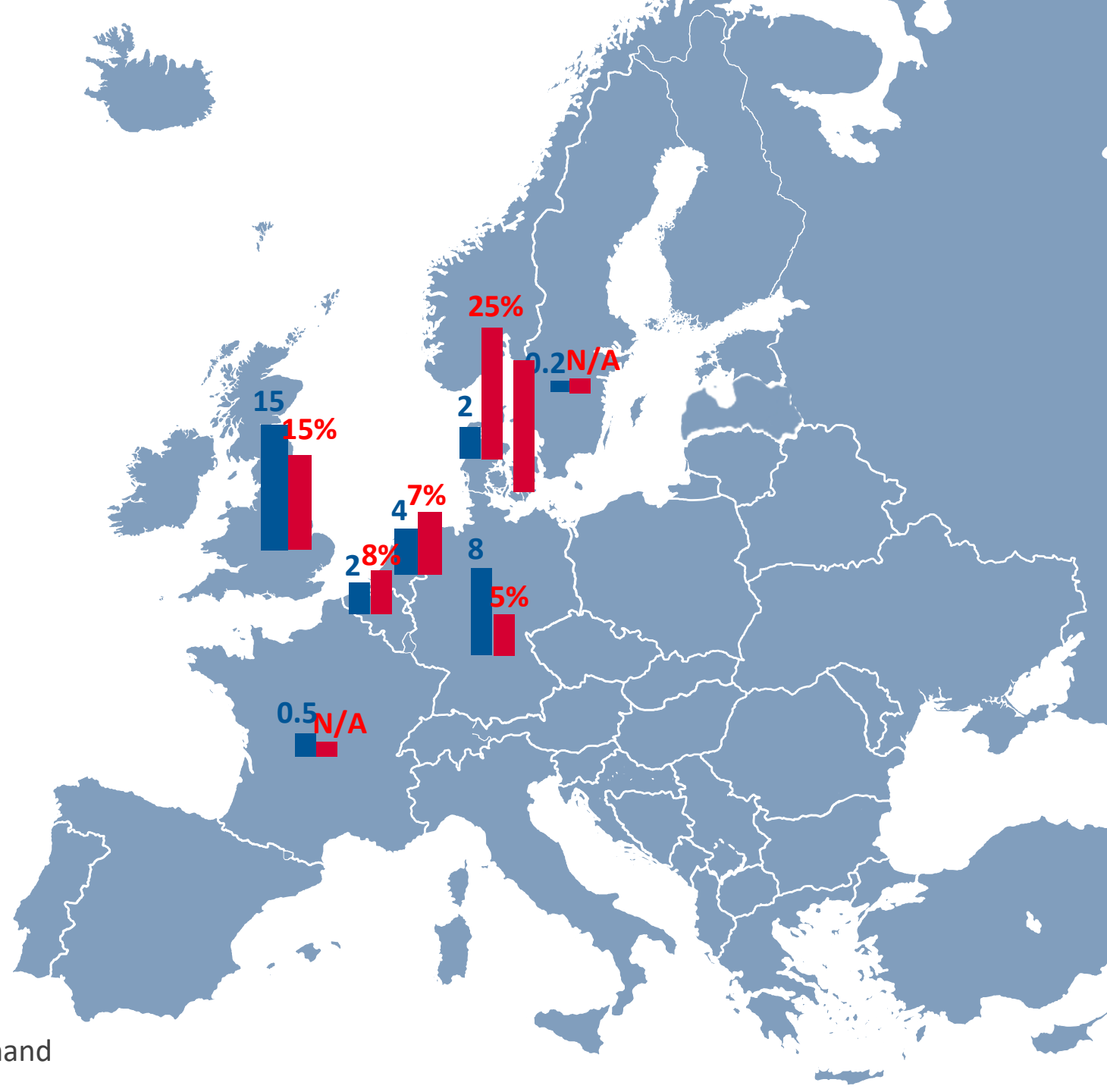
MEASURING THE FUTURE SUCCESS OF SUSTAINABLE BLUE ECONOMY IN THE BALTIC AND NORTH SEA

Mattia Cecchinato,
Senior Advisor for Offshore Wind

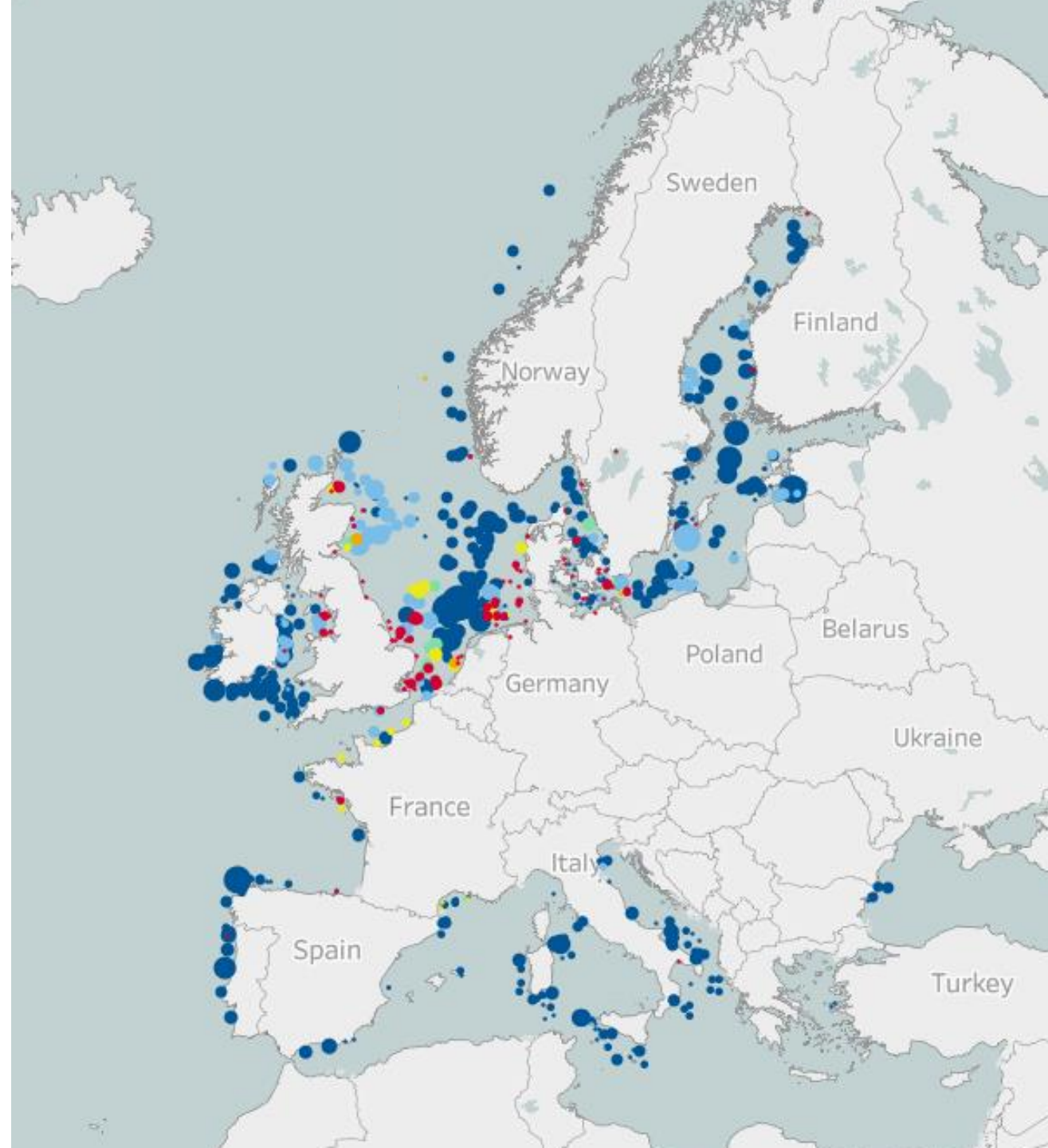
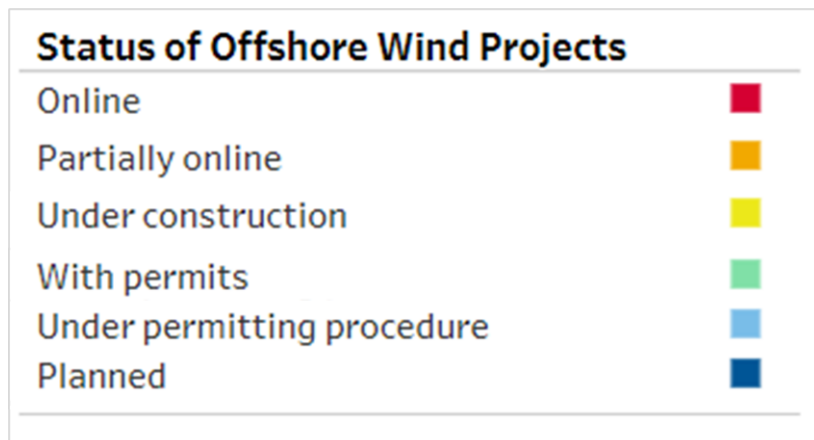
Offshore wind in Europe

32 GW

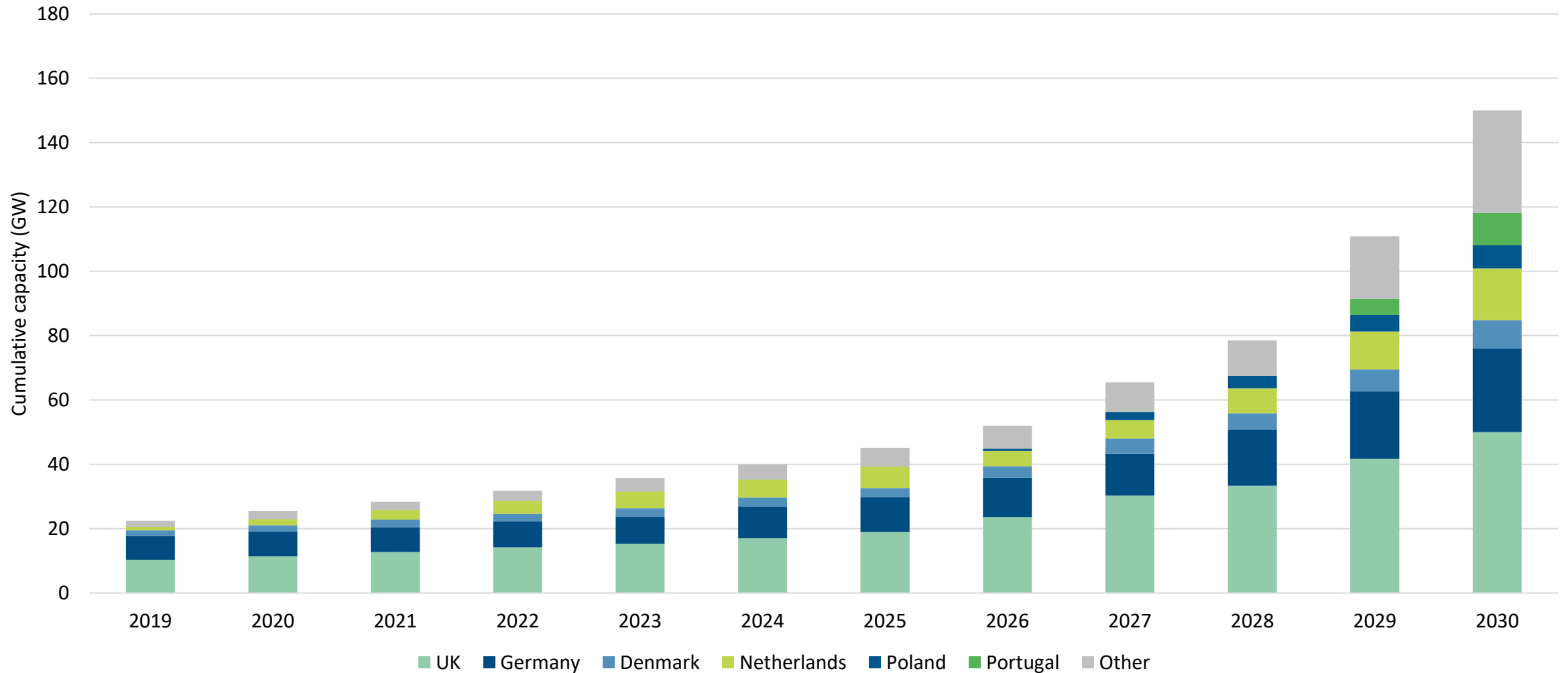
3%
of Europe's
electricity demand



Europe's offshore wind farms



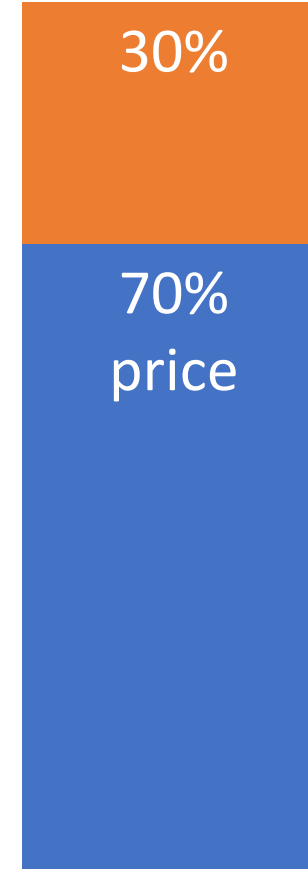
Governments want to do 150 GW of offshore wind by 2030



Auctions should reward the wider socioeconomic value



Cost auction model



Value auction model



With no support

Measuring Mission Ocean in the BANOS area

Liisi Lees

University of Tartu, Estonian Marine Institute

liisi.lees@ut.ee



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Mission objectives and targets

Restore our Ocean and Waters by 2030

Objective 1
Objective 2
Objective 3

PROTECT AND RESTORE MARINE AND FRESHWATERS ECOSYSTEMS AND BIODIVERSITY

- Protect at least 30% and strictly protect 10% EU's sea areas
- Restore 25.000 km free flowing rivers
- Marine nature restoration targets (incl. degraded seabeds, coastal ecosystems)

PREVENT AND ELIMINATE POLLUTION OF OUR OCEANS, SEAS AND WATERS

- Reduce by at least 50% plastic litter
- Reduce by at least 30% microplastics
- Reduce by at least 50% nutrient losses, chemical pesticides

MAKE THE BLUE ECONOMY CARBON- NEUTRAL AND CIRCULAR

- Net zero maritime emissions
- Zero carbon aquaculture,
- Low carbon multipurpose use of marine space

Baltic & North Sea basin

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Digital Ocean and Waters Knowledge system

Public mobilization and engagement

MAKE THE BLUE ECONOMY
CARBON- NEUTRAL AND
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What is Blue Economy?

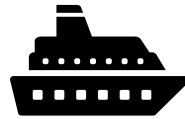
“A sustainable blue economy **promotes economic growth, social inclusion and improved livelihoods** while ensuring the **environmental sustainability** of the natural capital of the oceans and seas. Thus, the **sustainable blue economy encompasses all sectoral and cross-sectoral economic activities related to the oceans, seas and coasts**. It comprises emerging sectors and economic value based on natural capital and non-market goods and services through the conservation of marine habitats and ecosystem services”



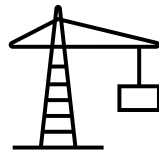
European Commission, European Climate, Infrastructure and Environment Executive Agency, *Sustainability criteria for the blue economy – Main report*, Publications Office, 2021, <https://data.europa.eu/doi/10.2826/399476>

Sectors considered in the Mission Ocean & Waters context

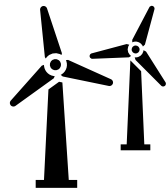
Focus on Mission Objectives in 4 sectors



Waterborne transport



Ports and associated facilities



Renewable blue energy production and
storage facilities (incl. **multiuse**)



Low-trophic/low-impact aquaculture



Baseline study for the
implementation of the lighthouse in
the Baltic and North Sea basins
for the Mission 'Restore our Ocean
and Waters by 2030'

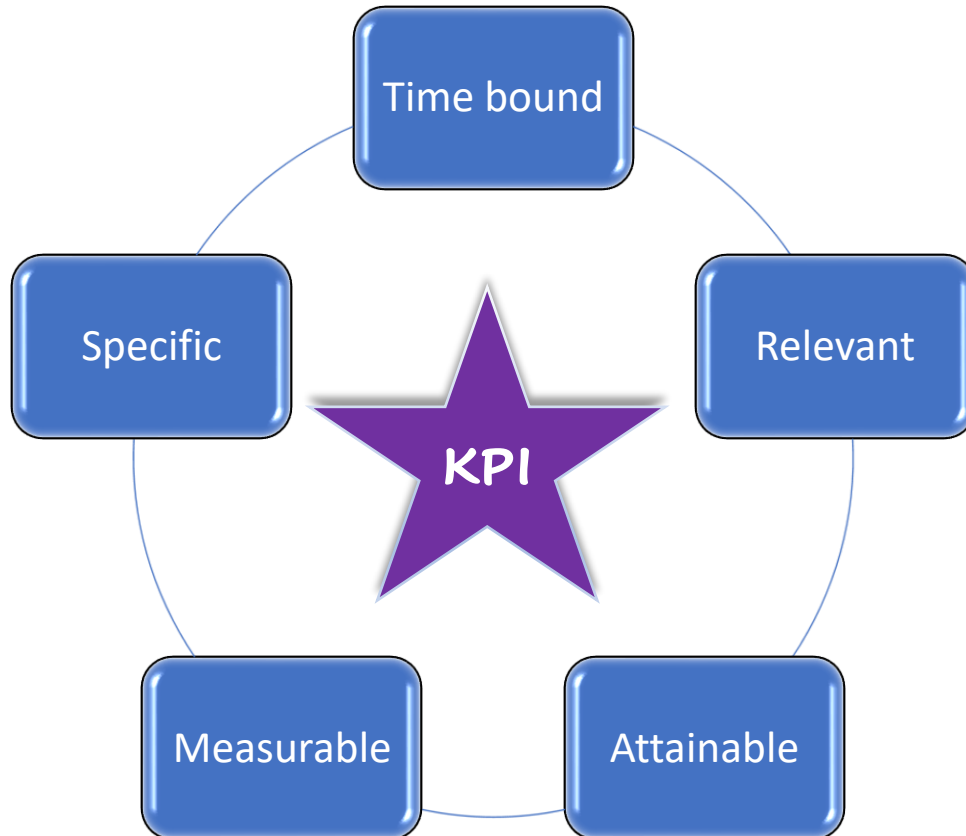
DEL 9 - Final Report

Independent
Expert
Report

Research and
Innovation

How to measure progress?

What gets measured gets done



EXAMPLES OF KPIs

- Turnover: m EUR/year
- Jobs: No. of jobs: x1000 persons/year
- Number of citizen awareness projects: Number
- Increase in renewable energy production in comparison to baseline: %

GROUP WORK: MAKING OUR KPIs!

Waterborne transport and ports: Moving goods and people by water, using both seas and rivers. Ports are central hubs, helping with loading, unloading, and other essential activities.

Renewable “blue” energy production and storage facilities: infrastructure harnessing and storing energy from marine sources.

Low-trophic aquaculture is farming aquatic organisms such as algae, filter-feeding shellfish (mussels, oysters), herbivorous fish, and invertebrates, minimizing environmental impact.

Multi-use: foster synergies between sectors, improve operational and spatial efficiency and sustainability and enable co-existence by using the same space for different activities, like shipping and aquaculture.

SLIDO QUESTION 2

GO TO www.slido.com & ENTER CODE **4079259**

The most crucial sector for achieving the mission objective "Decarbonizing the blue economy" is currently:

- Waterborne transport
- Ports and associated facilities
- Renewable blue energy production and storage facilities (incl. multiuse)
- Low-trophic/low-impact aquaculture



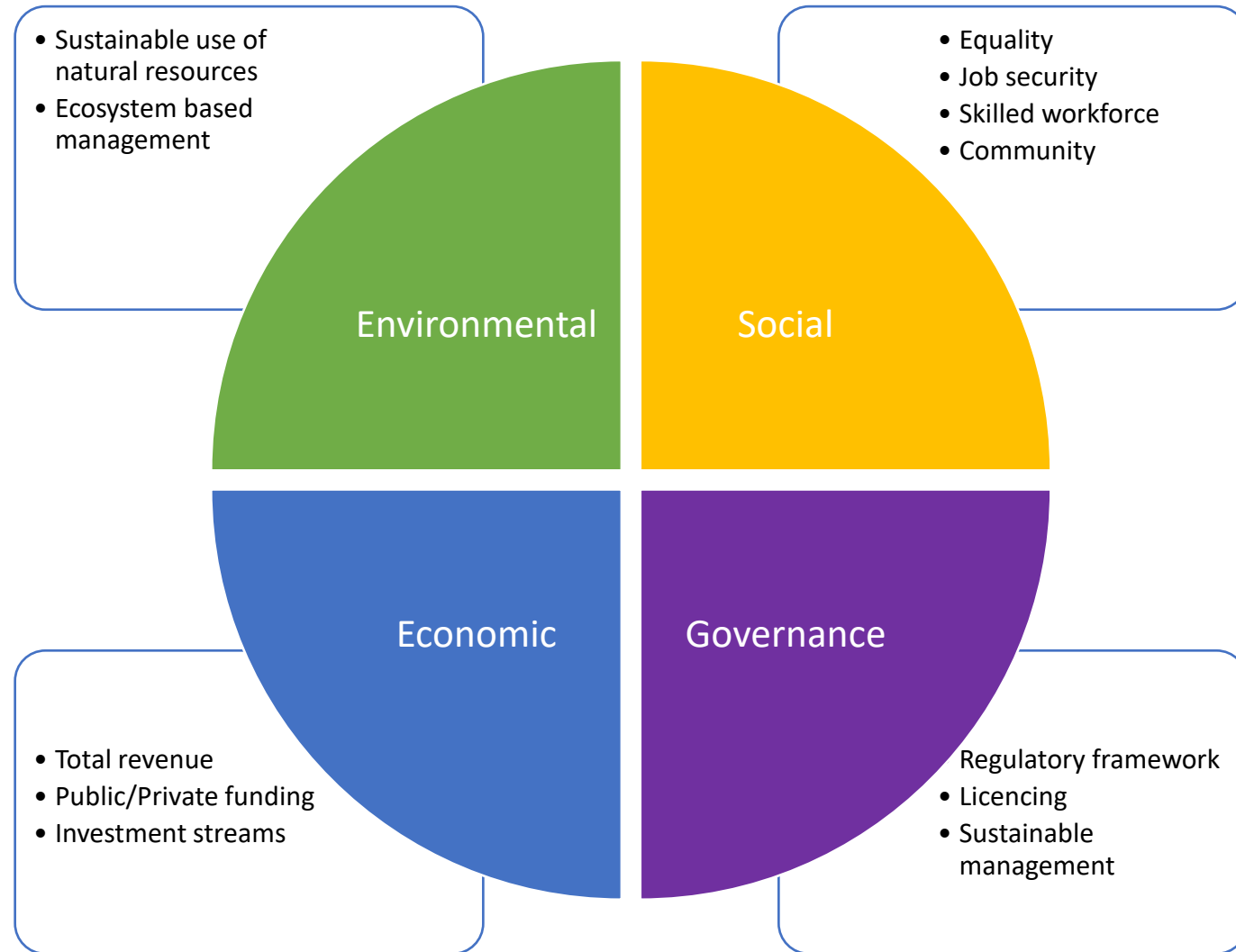
SLIDO QR

Sustainability Framework

TASK 1:

Framework: what does each dimension of sustainability framework mean for your sector.

5 min individual thinking, 15 minutes of group working.

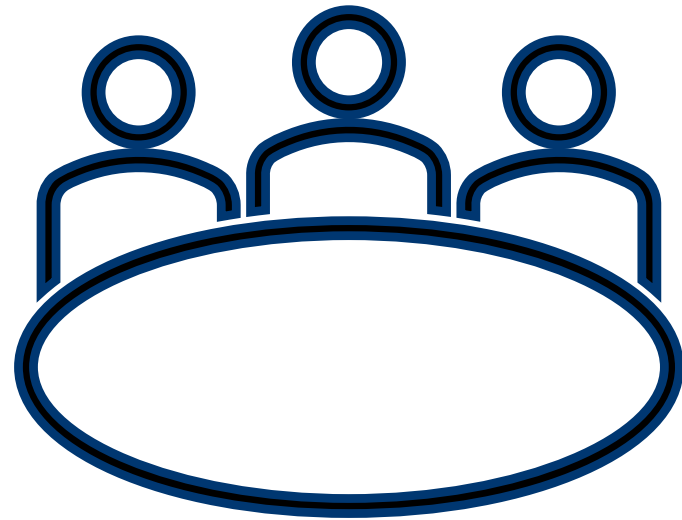


TASK 2:

How to measure these dimensions i.e. what could be potential KPIs?

5 min individual thinking, 15 minutes of group working

Feedback from tables.



SLIDO Q3

GO TO www.slido.com & ENTER CODE **4079259**



SLIDO QR

Have your final say.

Feedback, or something that you would still like to add to future KPI development. (open word).

**THANK YOU FOR YOUR
PARTICIPATION &
CONTRIBUTION TOWARDS
DEVELOPMENT OF THE KPIs**

