

2nd HIGH-TECH SUMMIT FOR THE BLACK SEA

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Testing future scenarios

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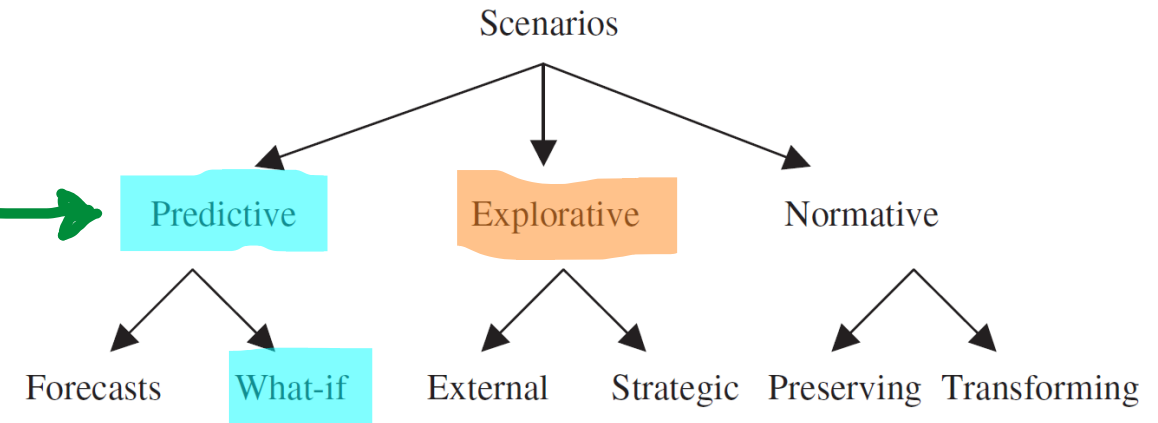
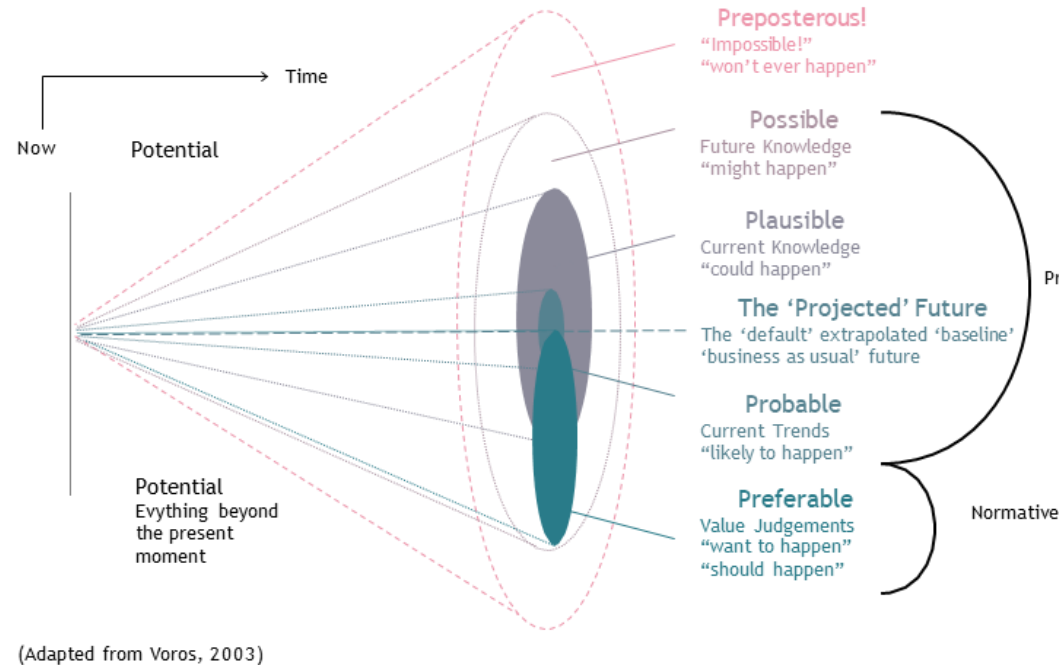
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Exploring sustainable futures

(Scenario typology from Borjeson et al., 2006)



Predictive: What will happen, on the condition that the likely development unfolds or on the condition of some specified events?

Explorative: What can happen to the development of external factors or what can happen if we act in a certain way?

We are testing in BRIDGE-BS – WP4 what we call **“DESIRED SCENARIOS”**, defined as **future realistic states** of sea uses and terrestrial uses influencing marine ecosystems and marine resources and targeting the **development of a sustainable blue economy**, under **projections of climate changes**.

How to build Desired Scenarios @ 2050?

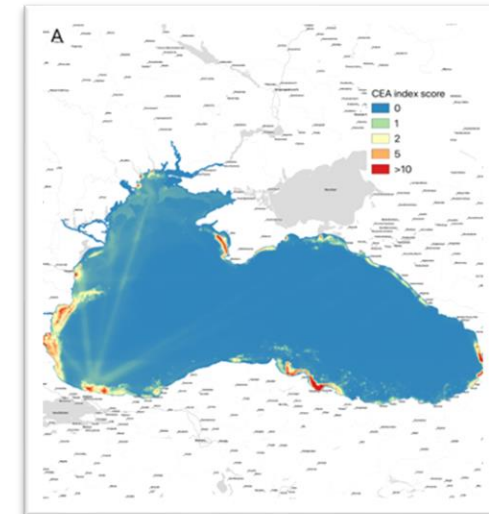
- Available information from different sources on **current status and expected trends**
- **Climate change** projections

- Sustainable Blue Economy **Imaginaries for the Black Sea**

“Unity in adversity”: desirable – sustainable - probable

“Ecotopia”: unrealistic – sustainable - desirable

- Outcomes of **Pilot Sites Living Labs**



Trends and actions considered in the scenarios

➤ Examples, used in specific sites and scenarios.....



Shipping

- ✓ Intensity of maritime transport
- ✓ Green shipping



Fisheries



Aquaculture

- ✓ Fishing effort, areas, gears
- ✓ Areas for potential aquaculture farms



Tourism

- ✓ Intensity and typologies of C&MT



MREs

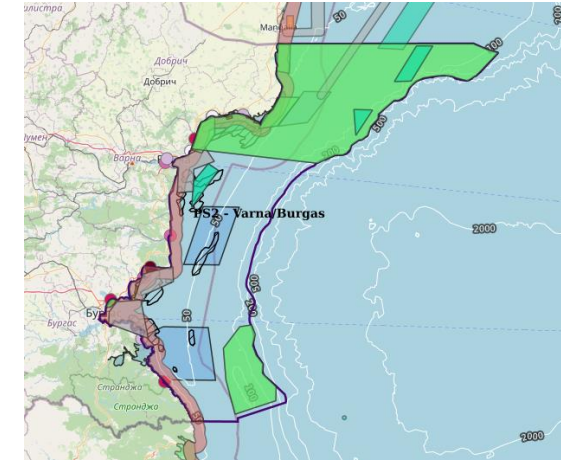
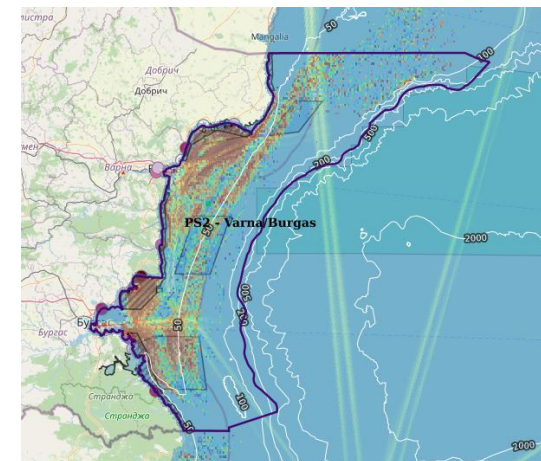
- ✓ Areas for potential MRE development

Land Based Activities

- ✓ Pollutant loads (nutrients and plastics)

Conservation

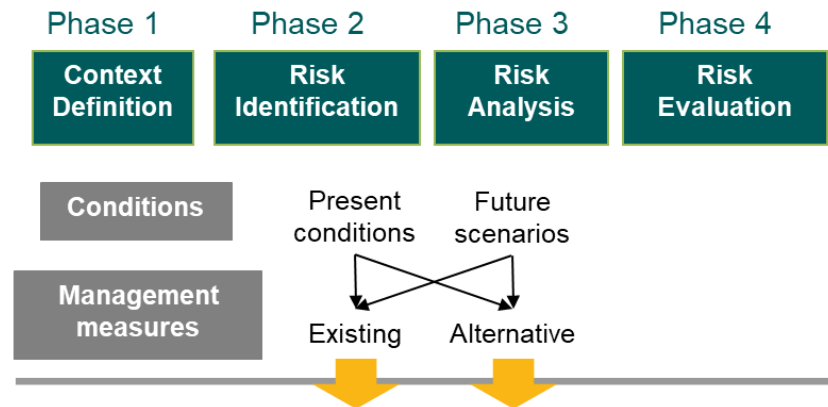
- ✓ New Protected Areas and other conservation measures



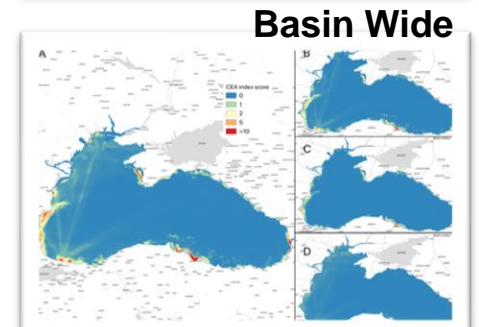
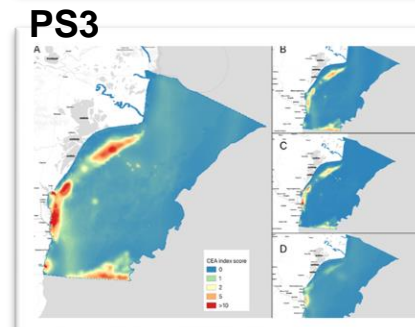
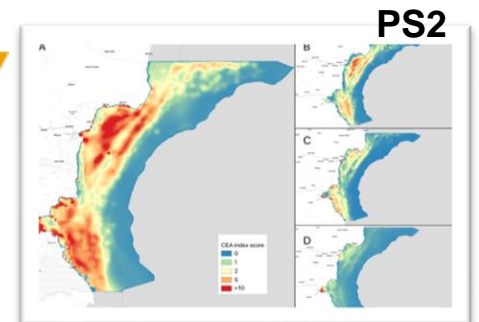
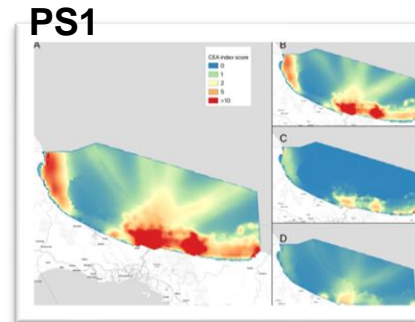
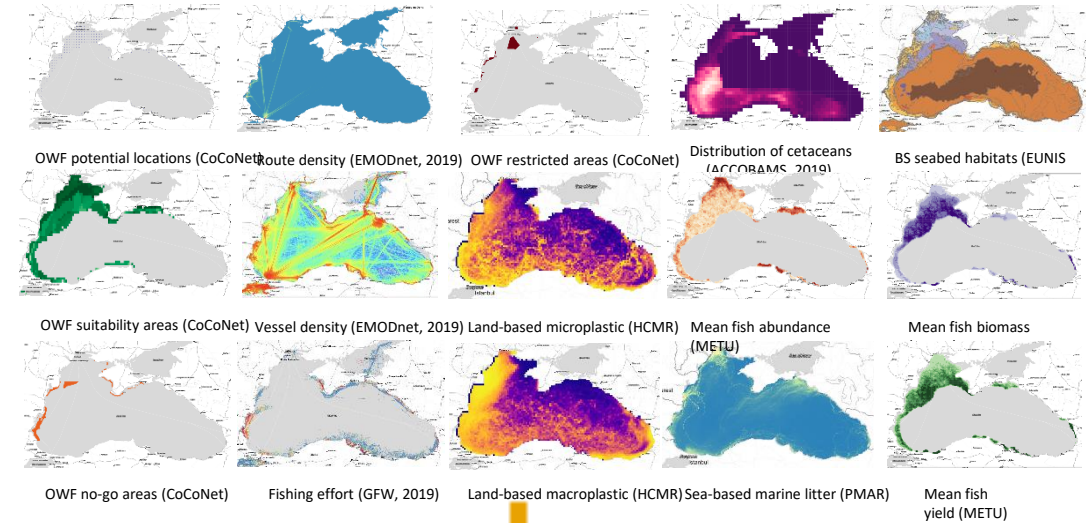
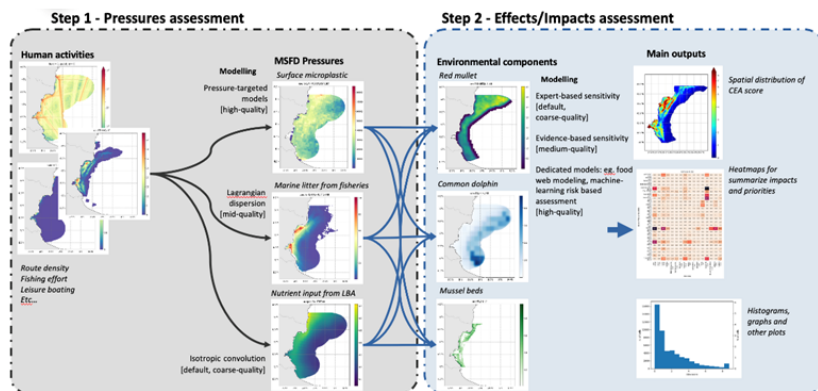
How to predict the “what if” on core Ecosystem Services?

RB-CEA (Risk-Based Cumulative Effects Assessment): Identify **hotspots of cumulative stressor impacts** on target Environmental Components and core Ecosystem Services Sea to generate **adaptive management strategies** in present and future scenarios.

Risk-based framework

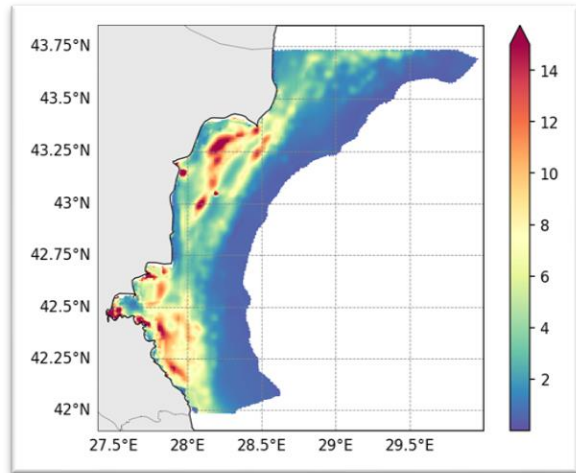


Cumulative Effects Assessment

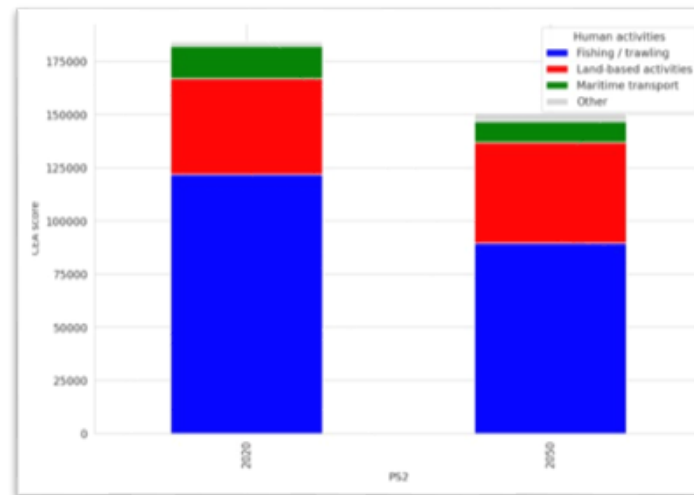
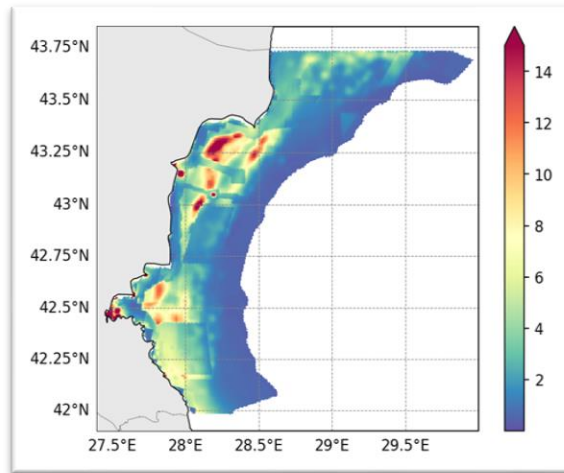


Key sectors and risks to address (today and tomorrow)

PS2 – CEA Score - 2020



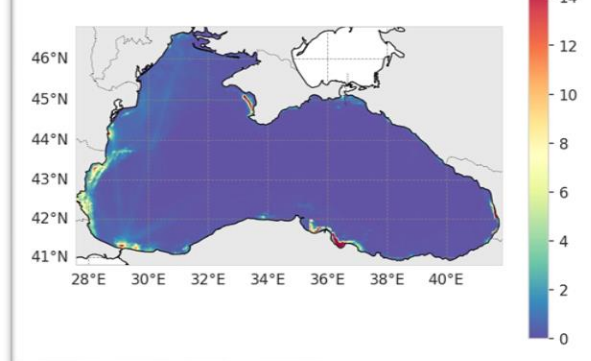
PS2 – CEA Score - Scenario 2050



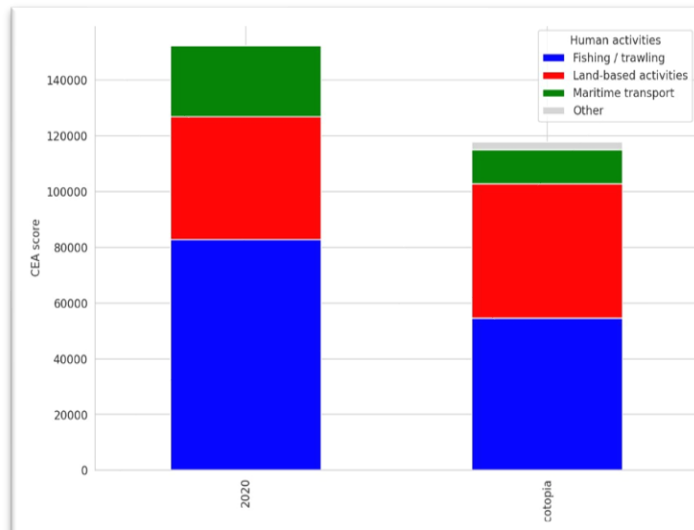
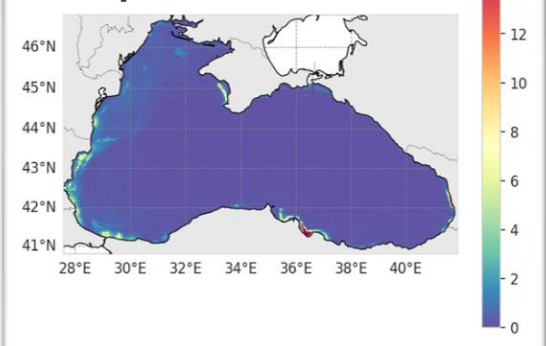
Key sectors to be considered are:

- Fisheries
- Land Based Activities
- Maritime transport

BS – CEA Score - 2020



BS – CEA Score - Scenario Ecotopia



Other sectors / activities may play a key role locally

The role of innovative solutions to ensure sustainable futures

➤ Examples, potentially used and tested (“what if”) in specific sites and scenarios....



Shipping

- ✓ Greener ports
- ✓ Greener vessels (e.g. silent ships, reduced emissions, improved ballast water management)



Fisheries



Aquaculture

- ✓ More efficient fleet
- ✓ Less impacting gears
- ✓ Fight against illegal fisheries
- ✓ Improved value chains

Land Based
Activities

- ✓ Practices and technologies applied to point and non-point sources (e.g. nutrients and plastics)

Cross-cutting and
overarching

- ✓ Real time / Near real time observing systems
- ✓ Decision Support Tools (e.g. Black Sea Digital Twin Demonstrator)
- ✓ Innovative technologies and services

THANK YOU!

STAY TUNED!

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