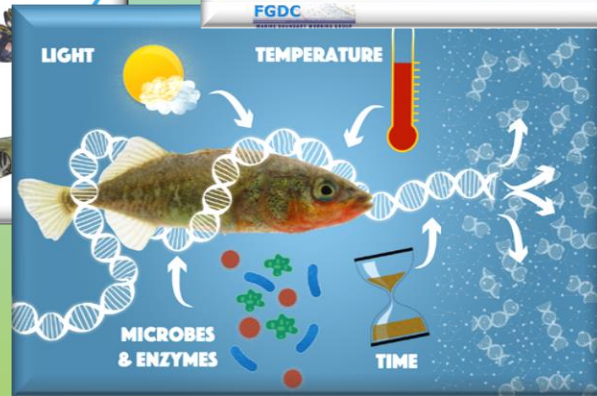
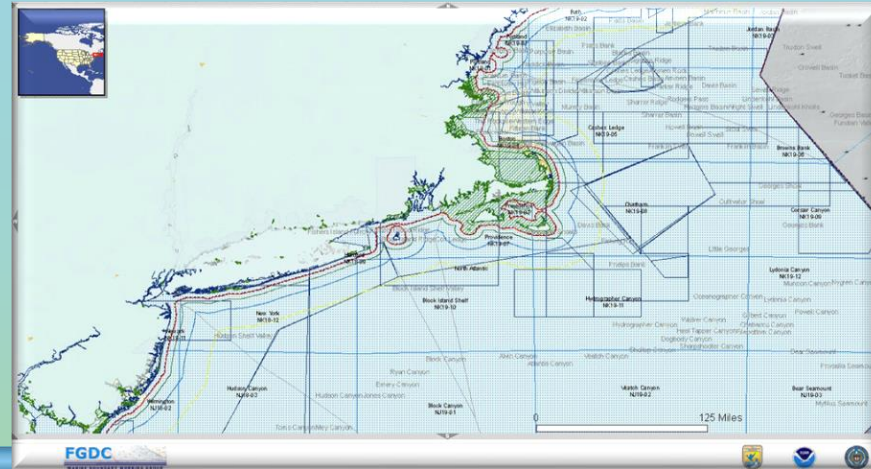
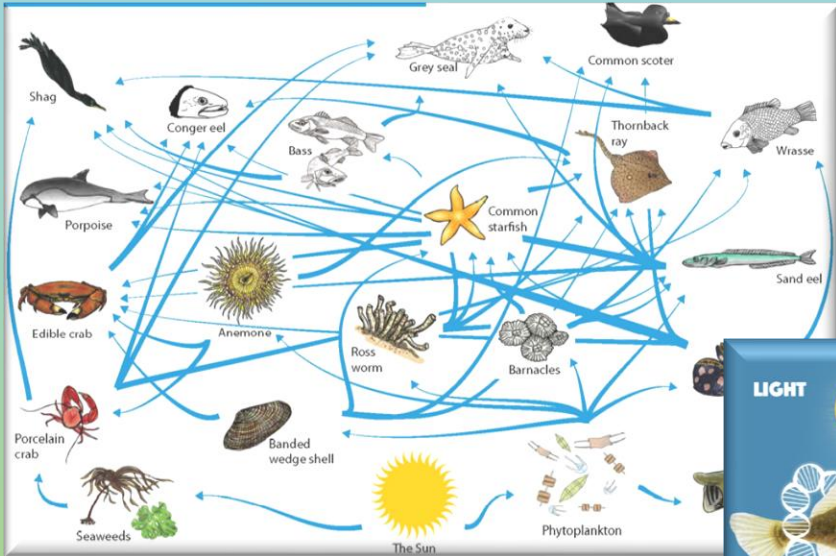
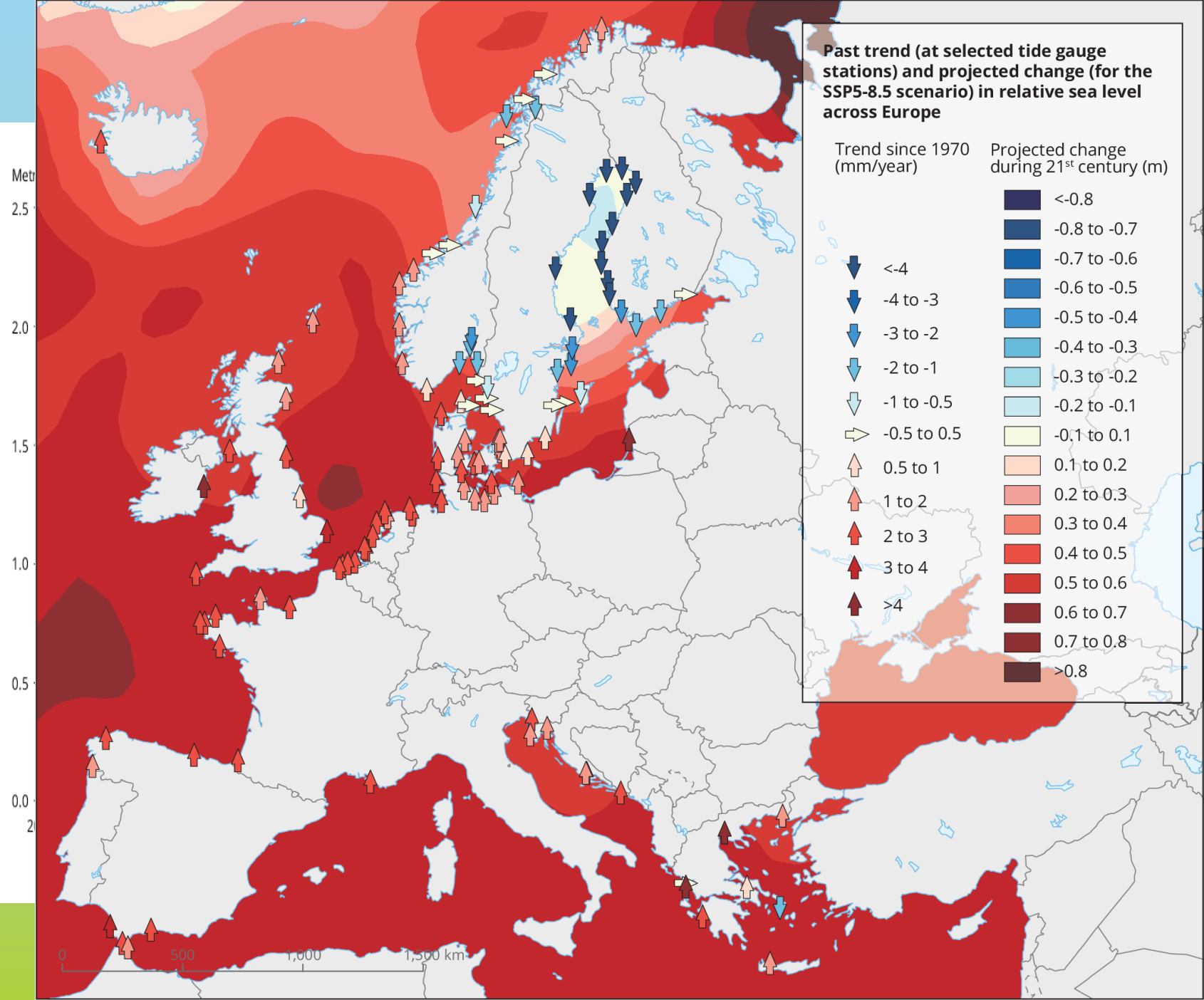
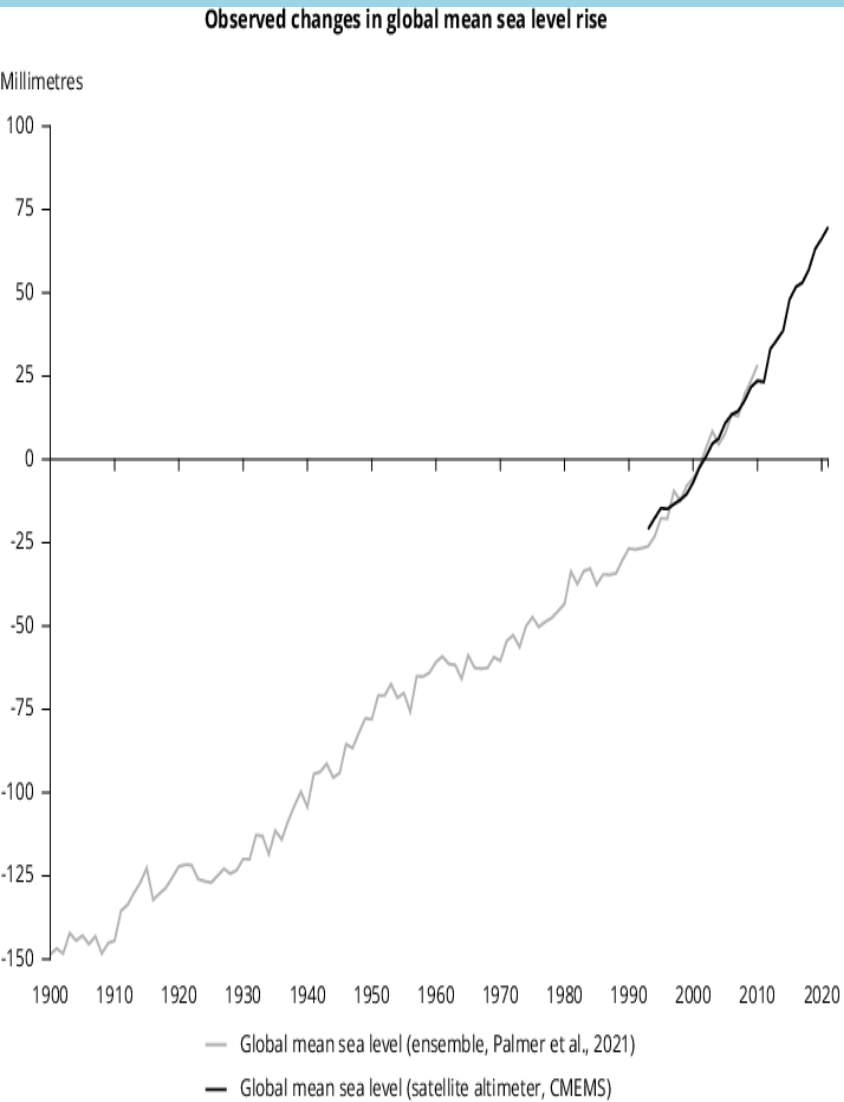


Launch of European Marine Board Position Paper on 'Building Coastal Resilience in Europe'

State of play of EU research and policies for Ocean and seas



Ivan Conesa Alcolea
Marine biodiversity & Ecosystem functioning
Unit B.4 Healthy Ocean and Waters
DG Research and Innovation
European Commission

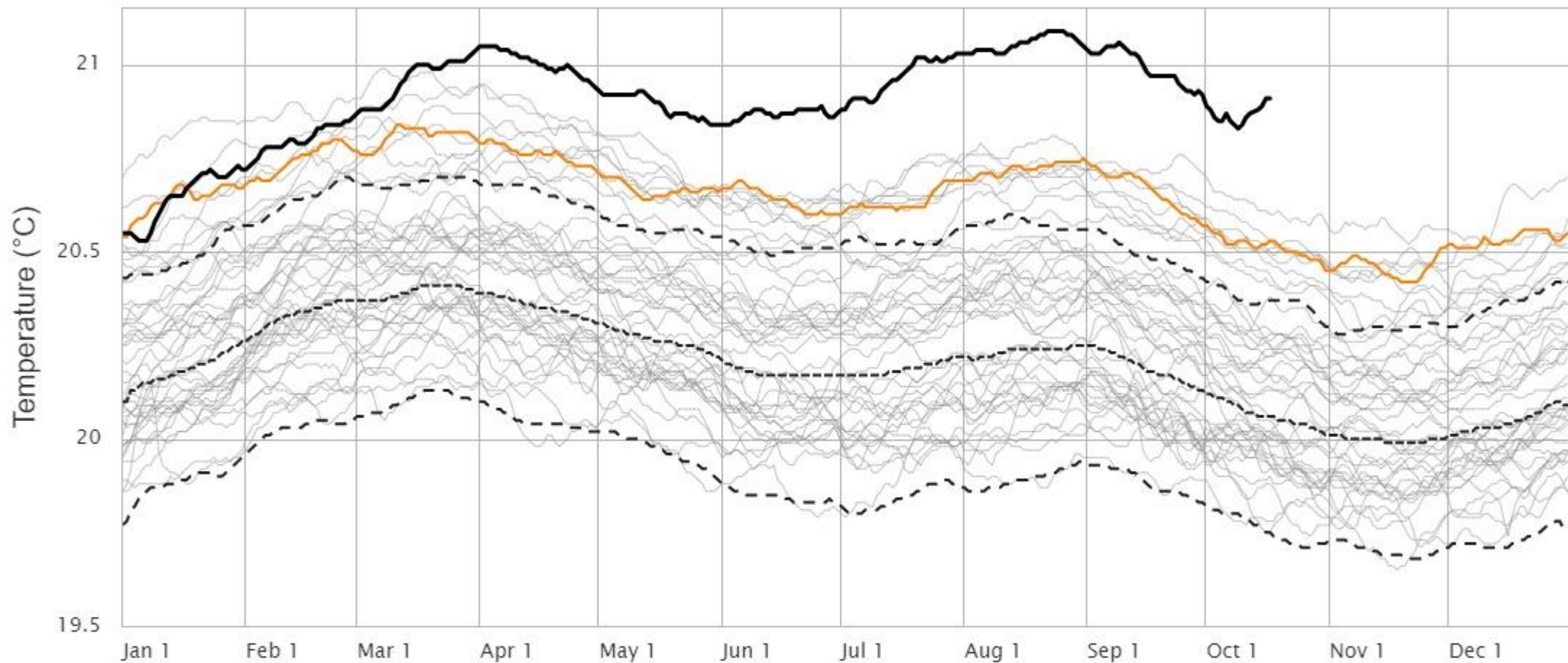


Global and European sea level rise – European Environment Agency 2022

Reference data: ©ESRI

SST World (60S-60N)

Data Source: NOAA OISST V2.1 | ClimateReanalyzer.org, Climate Change Institute, University of Maine

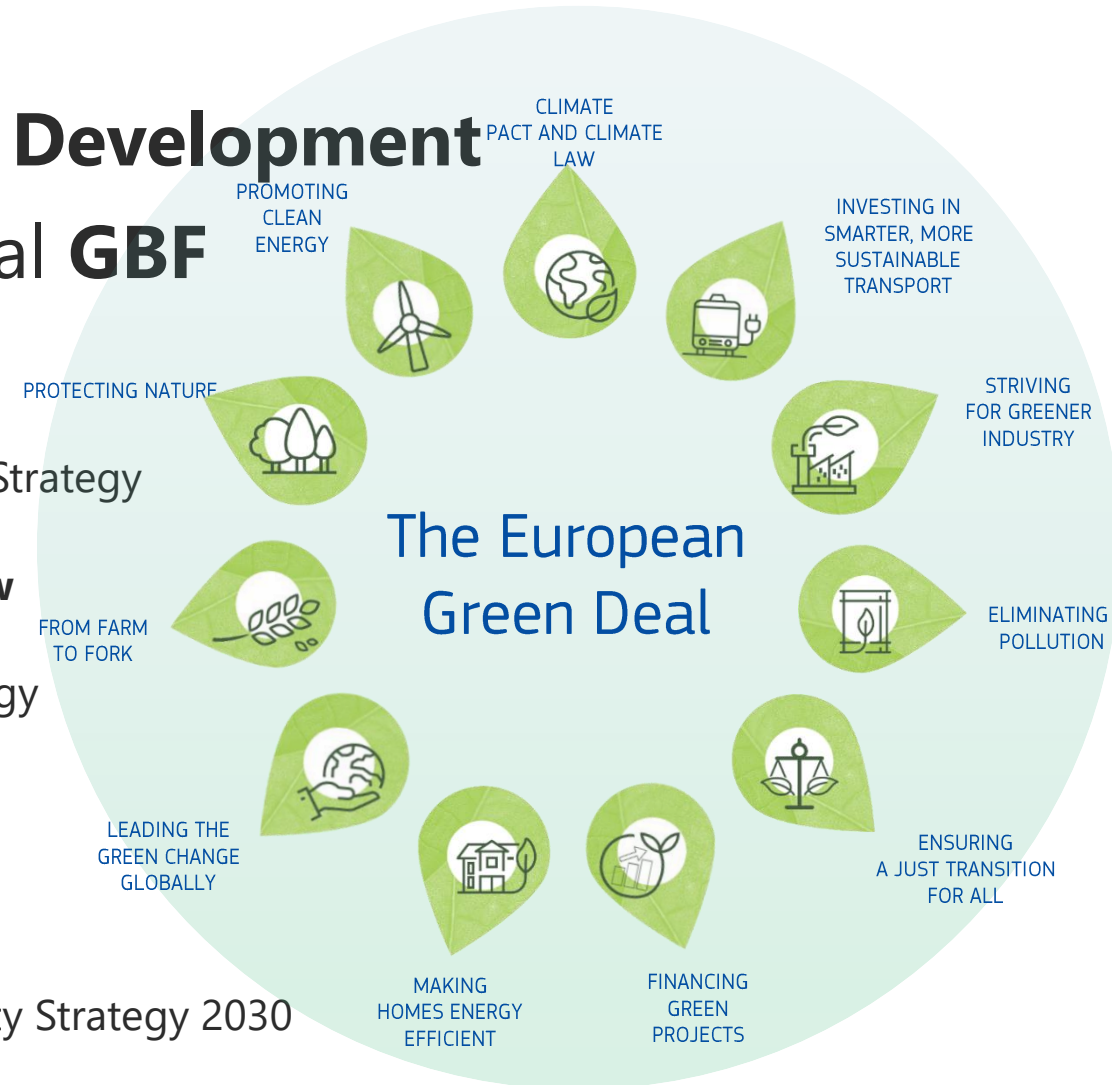


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|--------|------------------|-----------|------------|--------|--------|--------|
| — 1981 | — 1982 | — 1983 | — 1984 | — 1985 | — 1986 | — 1987 |
| — 1988 | — 1989 | — 1990 | — 1991 | — 1992 | — 1993 | — 1994 |
| — 1995 | — 1996 | — 1997 | — 1998 | — 1999 | — 2000 | — 2001 |
| — 2002 | — 2003 | — 2004 | — 2005 | — 2006 | — 2007 | — 2008 |
| — 2009 | — 2010 | — 2011 | — 2012 | — 2013 | — 2014 | — 2015 |
| — 2016 | — 2017 | — 2018 | — 2019 | — 2020 | — 2021 | — 2022 |
| — 2023 | — 1982-2011 mean | — plus 2σ | — minus 2σ | | | |

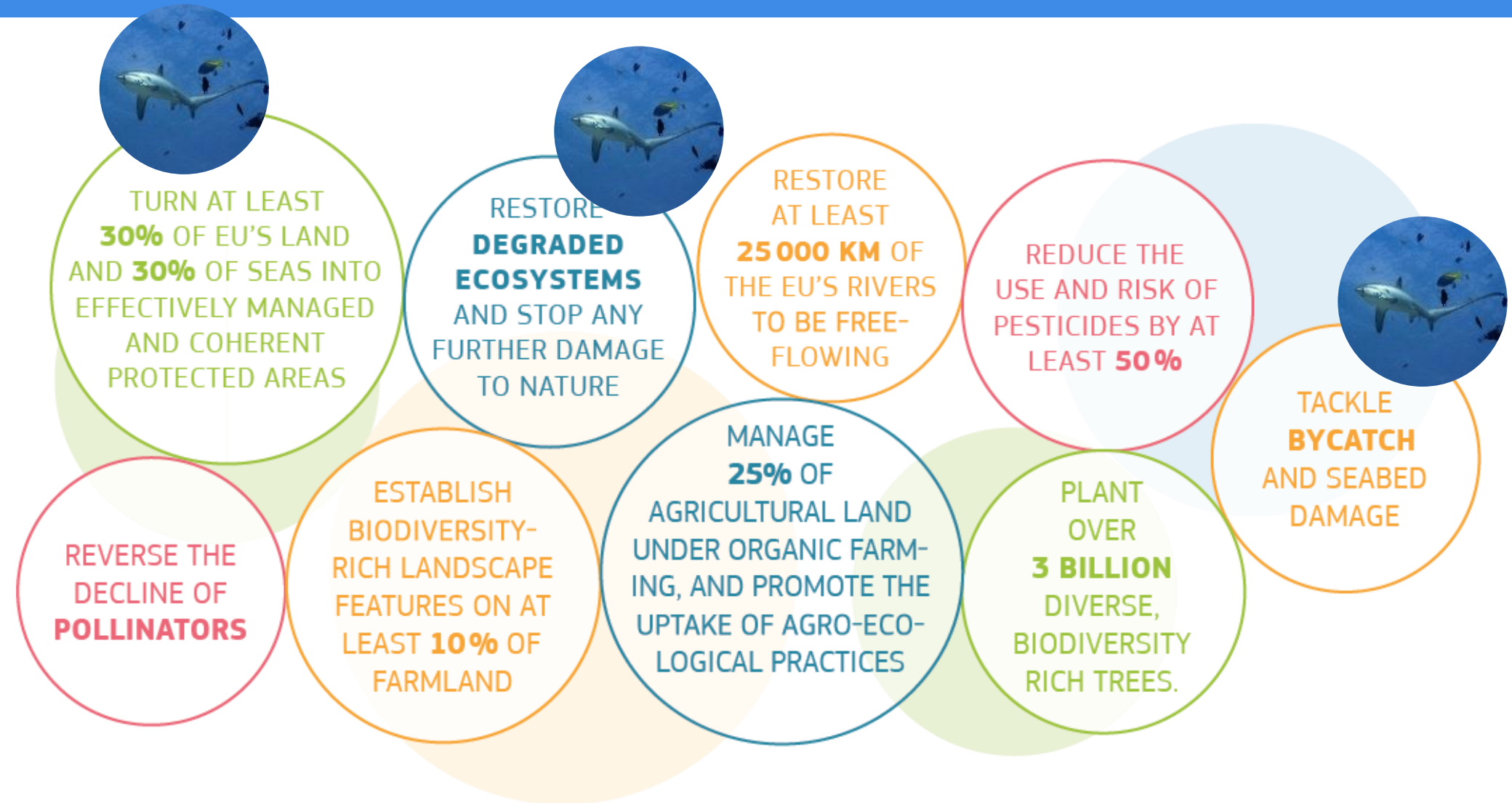
Policy context

- The **2030 Agenda for Sustainable Development**
- From Aichi to the Kunming-Montreal **GBF**
- The **European Green Deal**:

- EU **Biodiversity** strategy 2030,
- **Zero Pollution** action plan
- **Farm to fork** strategy
- Renewed **sustainable finance** strategy
- ... and more
- And Still MSFD, IMP & MSP included in the EU Biodiversity Strategy 2030
- **Climate adaptation** Strategy
- European **Climate Law**
- **Blue Economy** strategy



EU Biodiversity Strategy for 2030 - key targets



MSFD, HBD, CFP, IMP-MSP, WFD are included and underlined in the strategy

Horizon 2020 Green Deal Call

LC-GD-7-1-2020: Restoring biodiversity and ecosystem services

2020

REST-COAST - Large scale RESToration of COASTal ecosystems through rivers to sea connectivity

To deliver tools to address some of the key challenges to coastal ecosystems today - all consequences of a long history of environmental degradation of our rivers and coasts.

Operating within a limited social and technical consensus and a fragmented policy framework, measures often favour short term interventions leading to poor investment decisions. This, combined with increasing climate and human pressures and decreasing natural capital, results in declining biodiversity and ecosystem services, leading to growing costs and a significant Carbon footprint.



Improve coastal restoration practice and techniques through new hands-on restoration projects within the REST-COAST Pilots, supported by Restoration Platforms to demonstrate and scale-up measures for wider use.



Generate new tools and data to assess risk reduction at different climate change levels to provide consistent risk estimates across time scales and lower financial, social and political barriers to large scale restoration.



Design innovative financial arrangements and bankable business plans that support restoration upscaling by introducing co-financing options and long-term plans based on strategic investment pathways.



Develop a scalable plan for coastal adaptation through large scale restoration based on trade-offs and synergies between biodiversity and socio-economic development, aiming for financially viable solutions incorporating climate-resilient ecosystem services.



Co-design innovative governance arrangements and policies to overcome present barriers to large scale restoration and promote transformative changes in governance at all levels: from local to national and EU.



Support the Green Deal social transformation and engagement through a new Digital Platform dashboard, a Carbon Footprint Counter and a new App and Video game focusing on decarbonisation of coastal adaptation.



Engage with project stakeholders, EU Green Deal officers and international organisations to transfer REST-COAST restoration tools, data and expertise and demo material and ensure their uptake and exploitation.

Ocean, seas and water in HE



Restore our Ocean and Waters by 2030

Well beyond research
Engaging with citizens
Strong regional dimension
EU Sea/River basins
3 calls launched 20 projects on-going
EU funding so far: 340M€



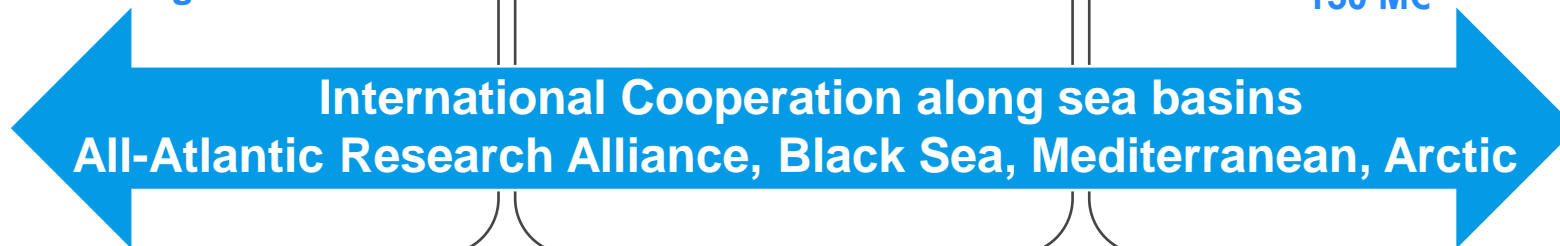
Seas and Oceans

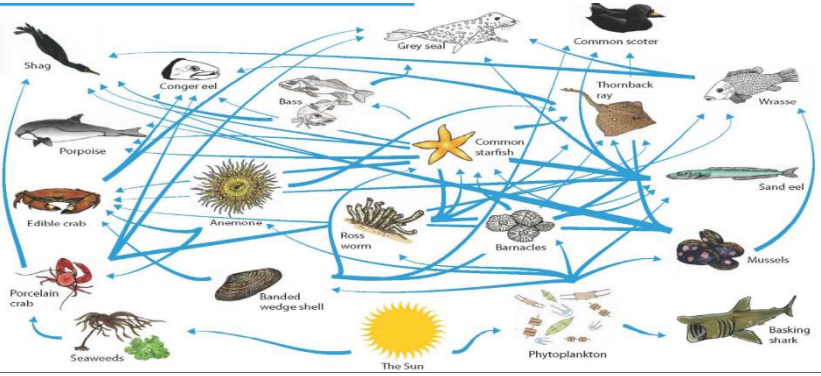
Research and innovation from long to short term
Broad scope on protect, restore and sustainably use marine biological resources
2 biannual WPs launched 31 projects on-going
EU funding so far: 347M€



Sustainable blue economy partnership

Structuring and co-funding R&I with MS
60 Partner institutions from 25 countries
First call published 13 Feb
EU funding so far: 83M€
Total expected EU funding: 150 M€





Biodiversity & ecosystem services Portfolio of projects



2021

Understanding and valuing coastal and marine biodiversity and ecosystems services - 29M€

BIOCEAN5D - To deliver key new biological/ecological data, Essential Ocean Biodiversity Variables and ecosystems functioning models

MARBEFES - ecological, economic and socio-cultural valuation tools using existing and new knowledge & data in 12 Broad Belt Transect case studies from the Arctic to semi-tropical areas, from shallow to deep areas



2021

Assess and predict impacts of cumulative stressors on coastal and marine ecosystems and their - 17M€



GES4SEAS – Tool for risks assessment and adaptive Ecosystem-Based Management (EBM), including new methods, biologging, satellite, (eDNA), for different ecosystem components, including management of HABs, jellyfish and invasive species

ACTNOW- understanding of Cumulative Impacts on European marine biodiversity, ecosystem functions and services for human wellbeing





Biodiversity & ecosystem services Portfolio of projects

2021

Improved science based maritime spatial planning and identification of marine protected areas - 10M€

MSP4BIO – develops and demonstrates the ways in which knowledge-based MSP becomes a vehicle and a tool for the protection and recovery of ecosystems



MarinePlan - tools and knowledge to align MSP and marine protected area (MPA) designation processes, which are lacking particularly regarding transboundary coordination and connectivity.



MPA Europe - holistic measures of biodiversity to encompass variation within and between species and of ecosystems as well as carbon cycle dynamics and climate change scenarios



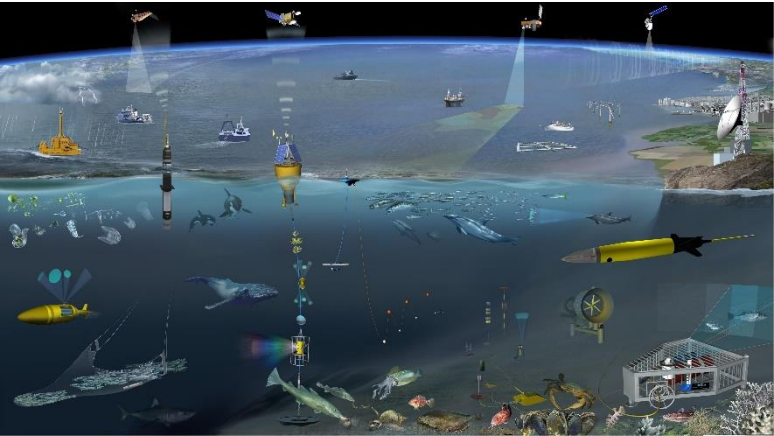
2021

Demonstration in coastal and marine ecosystems for restoration and resilience in simplified socio-ecological systems - 9M€

Marine SABRES – demonstration of Social-ecological systems-thinking and Ecosystem-Based Management in three Demonstration Areas (Tuscan Archipelago, the Arctic North-East Atlantic and Macaronesia) with multi actors approach



Biodiversity & ecosystem services Portfolio of projects



2022

Observing and mapping biodiversity and ecosystems, with particular focus on coastal and marine ecosystems - 18M€

OBAMA-NEXT – MARCO-BOLO – DiverSea new technologies and/or bring to higher TRL for new variables / data to make a leap in observation and characterisation of ecosystems functioning, in situ & large scale to feed new theoretical & numerical models for biotic component of ecosystems (DTO) and for EOB variables, uses for MPAs, MSP, ecosystem-based management, MSFD, WFD, restoration, Carbon / nutrients / energy balance from ecosystems biotic components



2023

Restoration of deep-sea habitats - 10M€

Demonstration of marine and coastal infrastructures as hybrid blue-grey Nature-based Solutions - 10M€

Gaps in preparation

The suit of 2021 programmed IA4 projects

Marine biodiversity: ecoΣ functioning, CNP, cumulated impacts & demonstration



Blue bioeconomy



Zero marine pollution



Coastal communities



Ocean-climate nexus



Aquaculture and fisheries



EVERYFISH
Digital transition of catch monitoring in European fisheries

Governance



The suit of 2022 programmed IA4 projects

Marine biodiversity: large scale observation in situ, new models and prediction



DiverSea

Ocean-climate nexus



Aquaculture and fisheries

NOVAFOODIES

IMPRESS

INNOAQUA

Blue bioeconomy



IGNITION

Governance



BlueGreen Governance





Mission objectives and targets

Restore our Ocean and Waters by 2030

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

ENABLERS

Digital Ocean and Waters Knowledge system

Public mobilization and engagement



EUROPEAN UNION

Mission lighthouses:

sites to pilot, demonstrate, develop and deploy the Mission activities across EU seas and river basins



Baltic & North sea basin



MAKE THE BLUE ECONOMY CARBON-NEUTRAL AND CIRCULAR

Mediterranean sea basin



PREVENT AND ELIMINATE POLLUTION OF OUR OCEAN, SEAS AND WATERS

Danube river basin



PROTECT AND RESTORE MARINE AND FRESHWATERS ECOSYSTEMS AND BIODIVERSITY

Atlantic & Arctic coast





Atlantic and Arctic lighthouse

Portfolio of projects

2021
2022
2023

Restoration of marine and coastal ecosystems and increased climate resilience
IA - 17M€

CLIMAREST - Coastal Climate Resilience and Marine Restoration Tools for the Arctic Atlantic basin

A-Agora - Blueprint for Atlantic-Arctic Agora on cross-sectoral cooperation for restoration of marine and coastal ecosystems and increased climate resilience through transformative innovation

Lighthouse CSA - 3M€

BlueMissionAA - Building a coordination hub to support the mission implementation in the Atlantic and Arctic basin

(With Mission Climate): demonstration for coastal resilience, IA - 20M€

Addressing climate change and human activities threats to marine biodiversity
IA - 16M€

Call deadline for WP2023 topics: 20/09/2023



European Blue Parks Portfolio of projects

2021

**European Blue Parks
IA - 17M€**

CITIZENOCEAN - Marine forest coastal restoration: an underwater gardening socio-ecological plan

BLUE4ALL - Blueprint demonstration for co-created effective, efficient and resilient networks of MPAs

2022

**European blue parks:
Protection and restoration
solutions for degraded
coastal and marine habitats
IA - 17M€**

PROTECT BALTIC- Enabling comprehensive effective and efficient protection and restoration measures for a resilient Baltic Sea ecosystem

EFFECTIVE- Enhancing social well-being and economic prosperity by reinforcing the eFFECTIVENess of protection and restoration management in Mediterranean MPAs

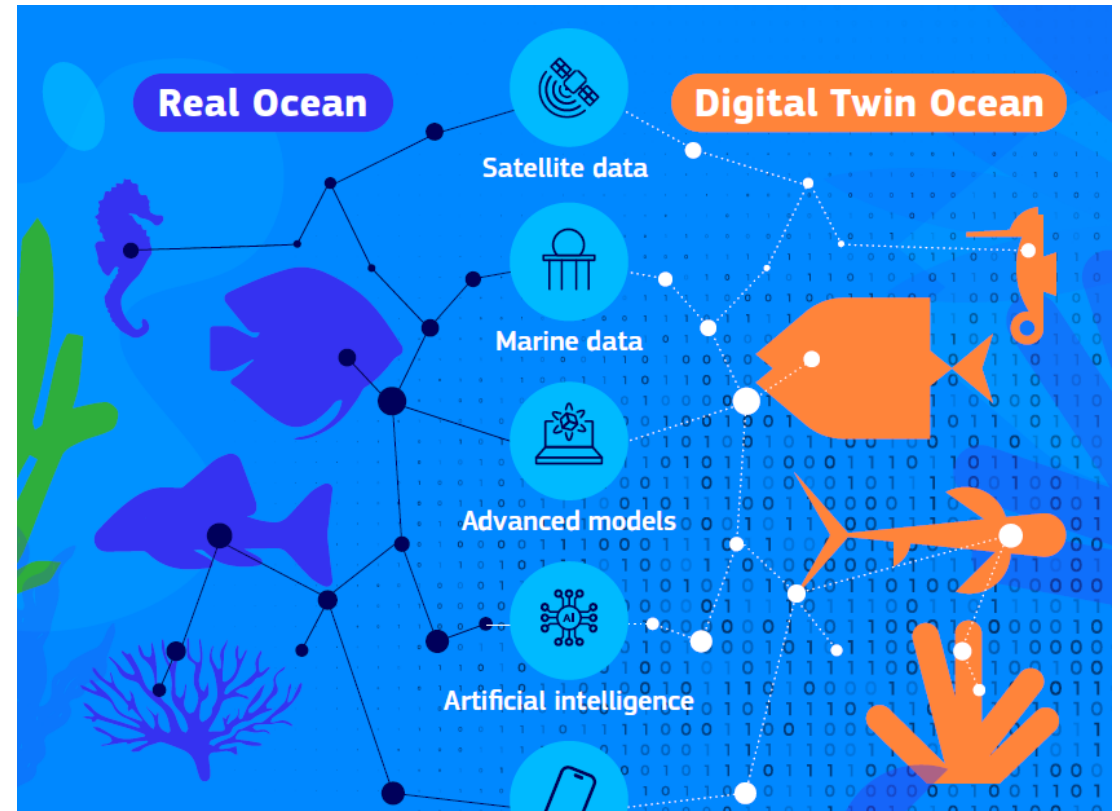
2023

**European blue parks:
Protection and restoration of
marine habitats
IA - 8.8 M€**

Call deadline for WP2023 topics: 20/09/2023



Enabler 1: Digital Ocean and Waters Knowledge System





Be part of the Mission: adhere to the Charter



[Restore our Ocean and Waters \(europa.eu\)](https://europa.eu)

Mission Charter

We are calling on Member States, regions and a wide range of stakeholders to endorse the [Charter](#) (EN | ...) and pledge actions that will contribute to the successful implementation of the Mission and its lighthouses.

Please click below to endorse the Charter and pledge actions

[Endorse the Charter](#)



Action pledges submitted so far: [interactive map](#) (EN | ...)

More information

- [mission-oriented policy for Horizon Europe](#) (EN | ...)
- [Horizon Europe](#) (EN | ...)
- [co-design session on oceans mission at Research and Innovation Days \(video\)](#) [↗](#)
- [EU Missions info days 2022](#) (EN | ...)

Contact

RTD-HORIZON-EUROPE-MISSION-OCEANS@ec.europa.eu

Adhere to the Charter by filling-in the form on [EUSurvey - Survey \(europa.eu\)](#)

And now ?



Education, narratives

Marine “biodiversity” = ecosystem functioning = services

Cognitive limitation to marine realm

Shifting baselines for sustainability, restoration objective, state of urgency / risk assessments

Education (science/ecology), basic knowledge for citizen & socio-eco sectors understanding & ownership.

Political leadership ?

Science policy interface has decades of history..

Example of NRL..

Upscaling, resolving economic competition fears..

Political divides builds on knowledge or ignorance

Break the silos

Need to integrate different knowledge (Ecology / physical-chemical oceanog., hydrology, O&CO, modelling, scenarios / land uses..

Between sectors plans & strategies

Mainstreaming Biodiv & CC Policies -

Integrating connectivity into policies, planning, and conservation

Integrated Solutions: Policy, Science, and Capacity are Essential

Enabling transformative changes (IPBES 2019). From small scale in diverse settings, economic mantras (ROI..Economic leadership at scale) Flexible / adaptative legal frameworks Governments silos / ministries/policies/subsidies

NBS: tradeoffs with a mono “climate” specific objective vs. as a multiple benefits/ impacts approach, for both climate, ecosystem functioning, long term socio-economic prosperity / resilience

Personal questions / réflexions



EUROPEAN UNION



Thank you!

#MissionOcean

#EUmissions

#HorizonEU

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