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# EU MISSIONS

**RESTORE OUR OCEAN & WATERS**

**Concrete solutions for our greatest challenges**

**September 2024**

- Nikos ZAMPOUKAS
- DG Research & Innovation, Unit B.4, Oceans, Seas and Waters

**#EUmissions #HorizonEU #MissionOcean**





# Mission objectives and targets

## Restore our Ocean and Waters by 2030

Objective 1

**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)

Objective 2

**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

Objective 3

**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



## Political Guidelines 2024-2029

Learn more >



### EUROPE'S CHOICE

POLITICAL GUIDELINES  
FOR THE NEXT EUROPEAN COMMISSION  
2024–2029

**Ursula von der Leyen**  
*Candidate for the European Commission President*

- New Commissioners: Fisheries and Oceans, Mediterranean
- A European Oceans Pact
- A new Pact for the Mediterranean
- European Water Resilience Strategy
- Strategy for European Life Sciences



# Implementing the Mission Ocean and Waters

## 1. Mobilisation of relevant actors

**Mission Lighthouses:** established frameworks for basin-level cooperation

**Mission Charter:** >600 actions with EUR 5.5bn, incl. buy-in from MS, regions, cities

**Mission Forum:** Annual gathering of Mission community

**Blue Parks community:** growing community of >80 members sharing knowledge, practices and assistance

**Digital Ocean Forum:** Building the community of practitioners delivering the DTO

**Young people:** volunteering (ESC), citizen science (Plastic Pirates), literacy (blue schools)

## 2. Supporting the transitions

**Developing and demonstrating solutions:** Growing portfolio of 66 projects with solutions tried and tested in >200 demo sites.

**Associated regions:** Making solutions available to >100 regions

**DTO:** Delivered the prototype DTO in June 2024

**Support communities:** technical assistance to 50 + 100 communities

**Implementation platform:** Matchmaking, support services, solutions portal, etc.

## 3. Deployment at scale

**Financial support:** synergies with structural funds, RRF, EMFAF, etc

**Regions:** development of Co-operation Working Arrangements to align and leverage funds

**Blue Champions:** financial advisory to 20 SMEs with EIB

**Philanthropy:** Alignment of public and private funds





# Member States governments supporting the Mission

## Charter adhesions

- DE Federal Ministry of Research and Education
- FI Ministry of the Environment
- FR Secretariat General de la Mer, Ministry of higher education and research
- HR HRVATSKE VODE (National Public Waters Authority)
- IE Uisce Éireann (National Public Waters Authority)
- IT Ministry of Universities and Research
- ES Ministry of Environment and Territory of the Balearic Islands
- ET Estonian Ministry of Rural Affairs
- LT Lithuanian Inland Waterways Authority
- LV Ministry of Environmental Protection and Regional Development of the Republic of Latvia
- MT Transport Malta
- PT Agência Portuguesa do Ambiente
- SK Slovak Environment Agency

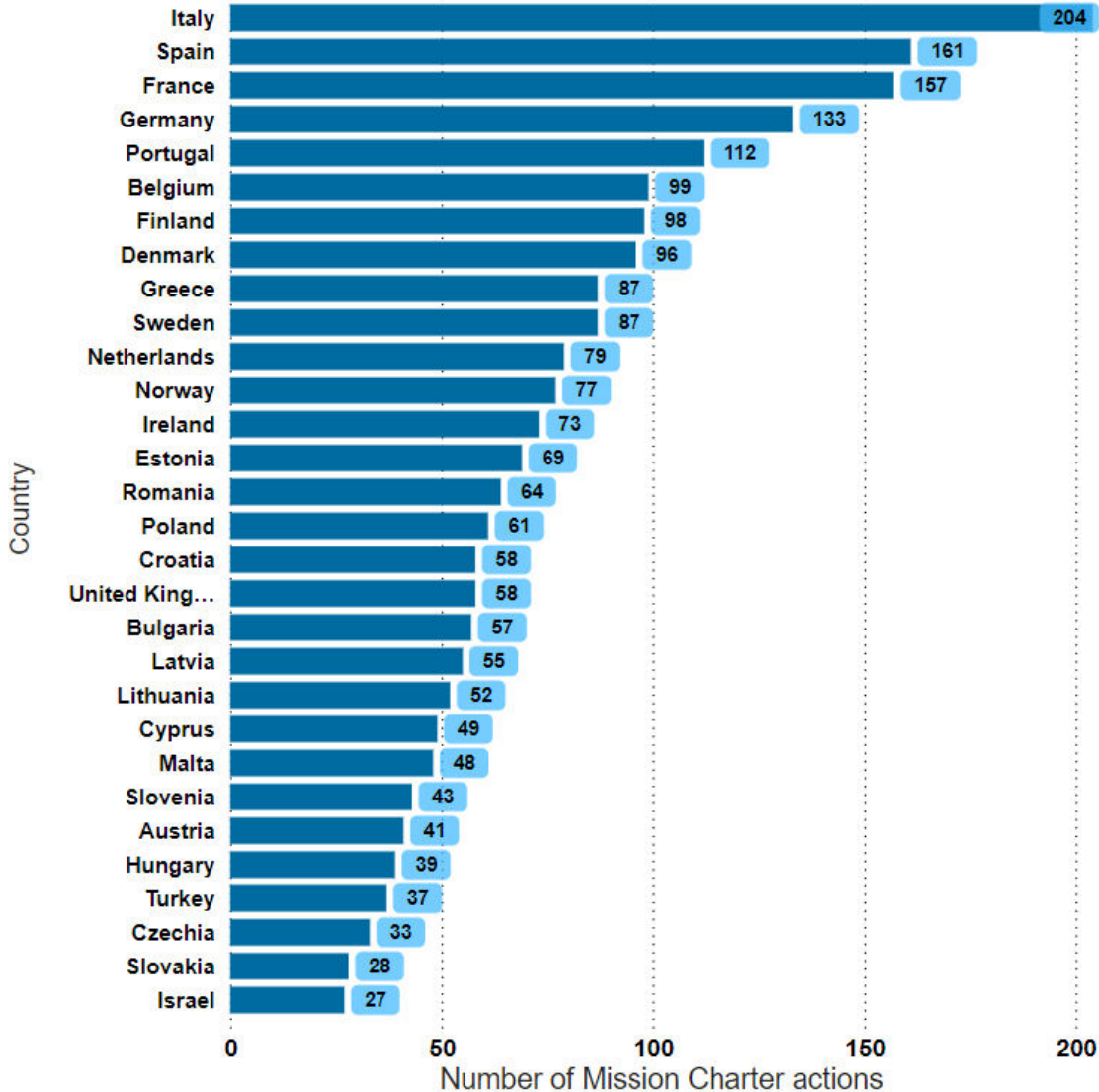
## and political statements across all lighthouses





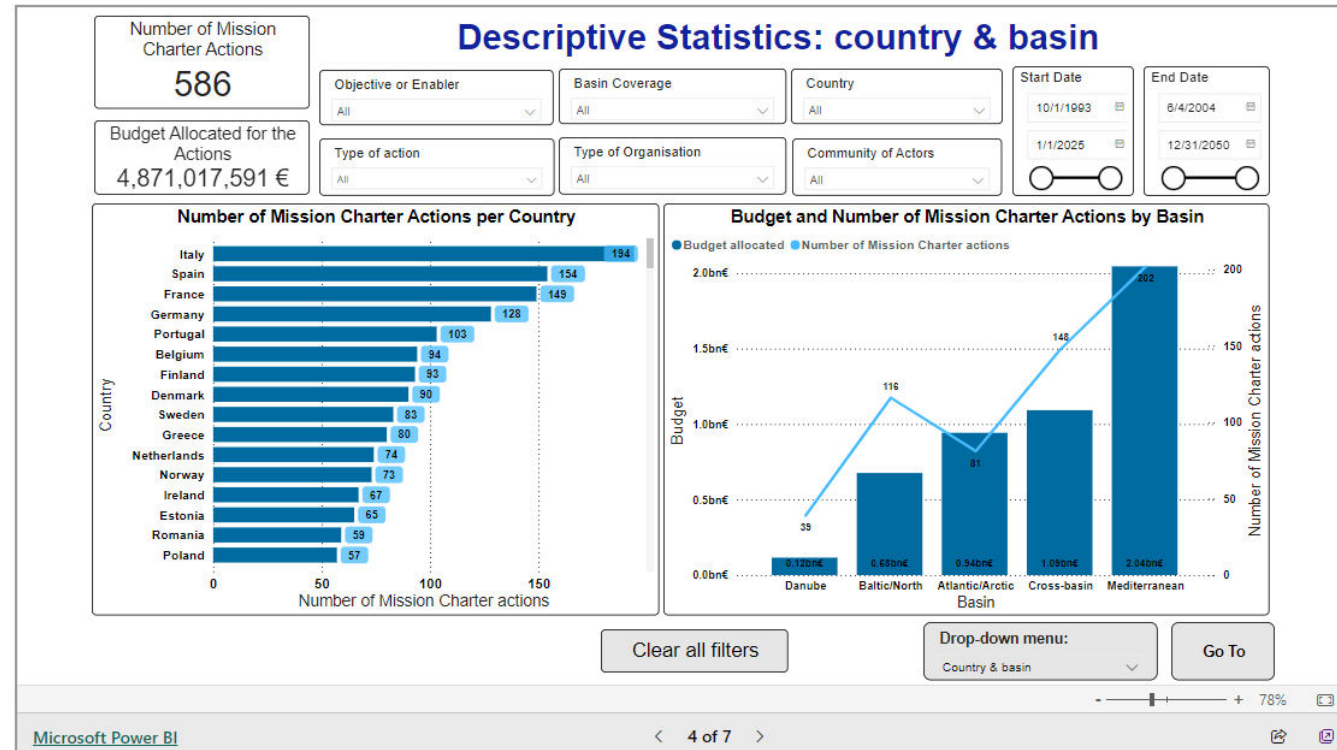
# Mission Charter actions

Number of Mission Charter Actions per Country



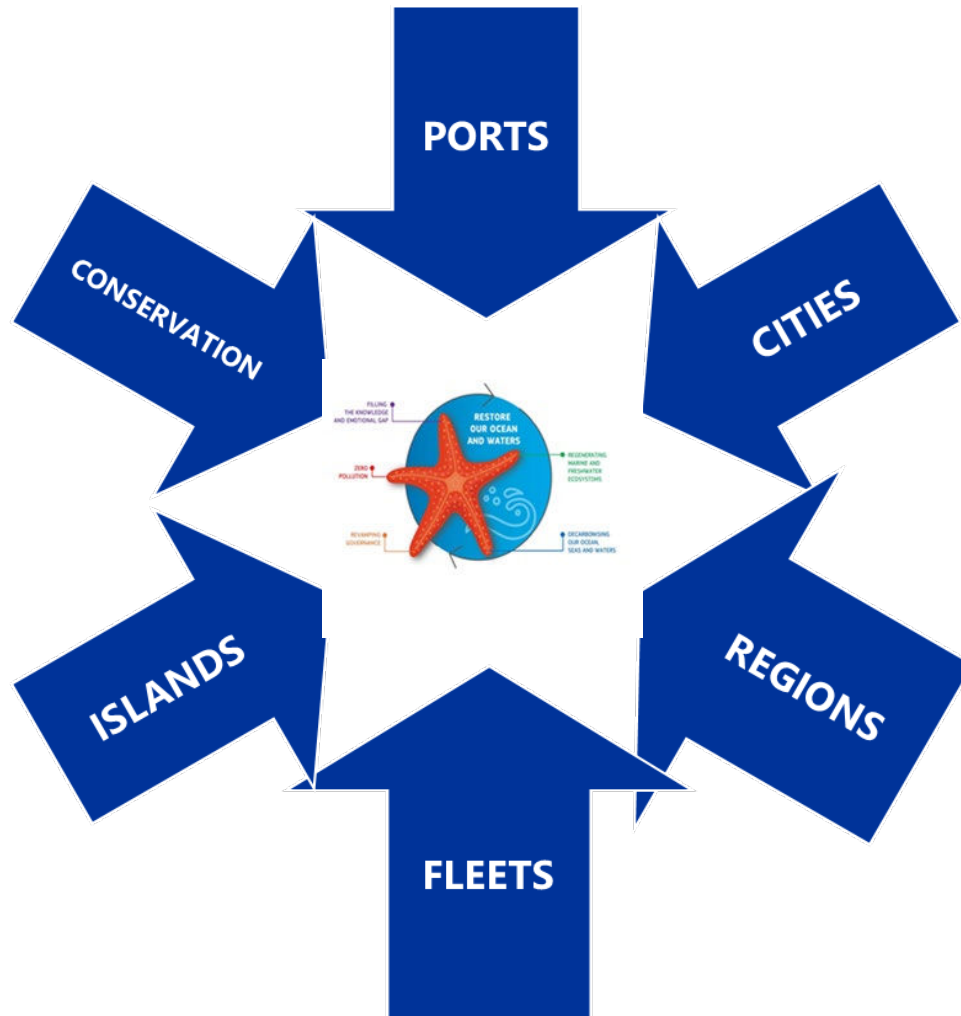
586 actions already visible in the Mission Atlas:

[https://maritime-forum.ec.europa.eu/theme/research/mission-ocean-and-waters\\_en](https://maritime-forum.ec.europa.eu/theme/research/mission-ocean-and-waters_en)





# KEY ACTORS –MISSION CHARTER

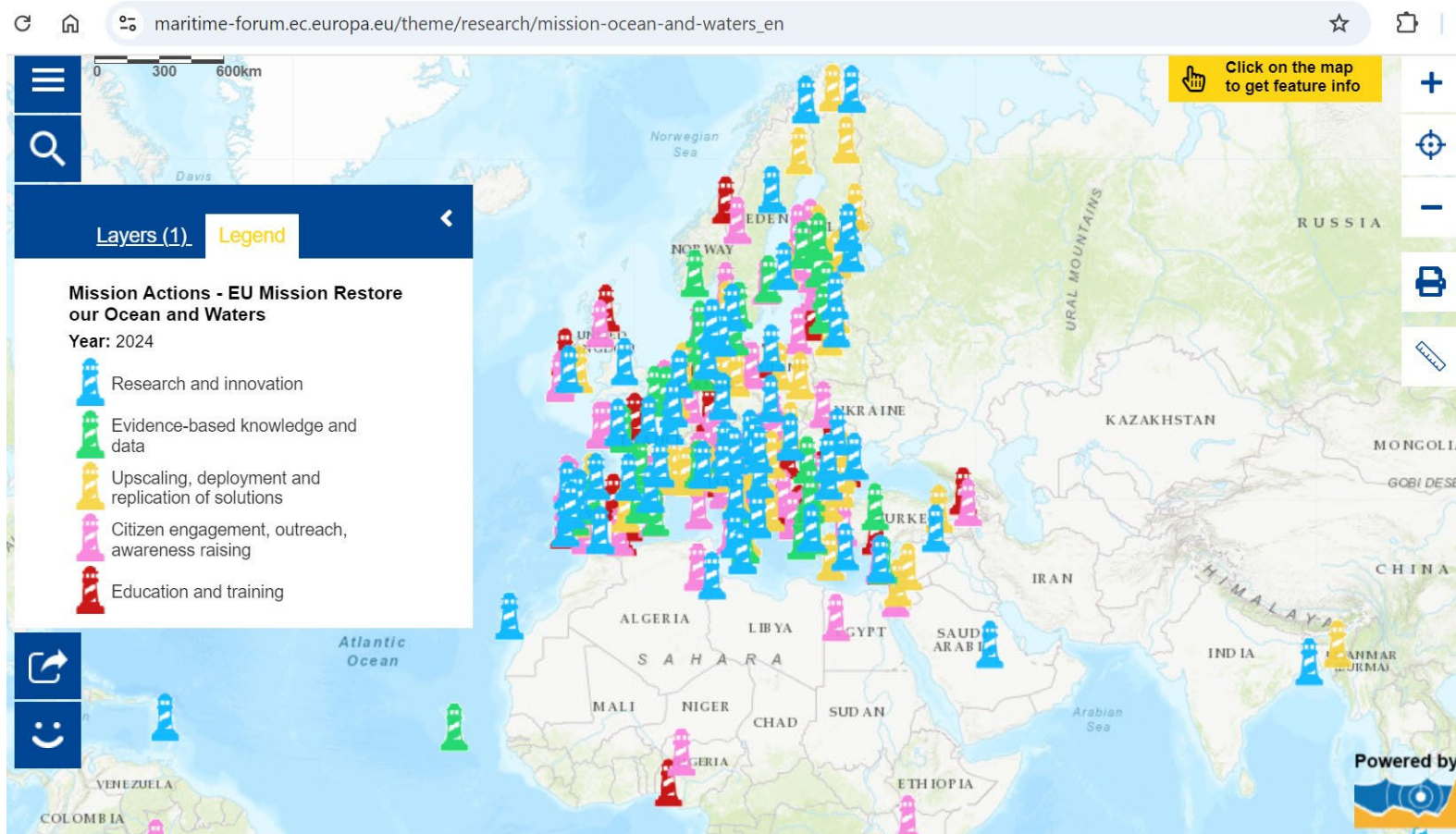


- national authorities
- regions
- cities
- islands
- Port and fleets
- Research & academia
- Private enterprises
- MPAs
- NGOs
- ...





# ENDORSE THE MISSION CHARTER



<https://ec.europa.eu/eusurvey/runner/MissionOceanWatersCharter>



# Objective 3



## Baltic and North Sea lighthouse

### Portfolio of projects

2021  
2022  
2023

**Low impact marine aquaculture and multi-purpose use of marine space, IA – 16M€**

**ULTFARMS** - circUlar Low Trophic offshore Aquaculture in wind farms and Restoration of Marine Space  
**OLAMUR** - Offshore Low-trophic Aquaculture in Multi-Use Scenario Realisation

**Lighthouse CSA - 3M€**

**BlueMissionBANOS** - Supporting the Mission Ocean Lighthouse in the Baltic and North Sea basins

**Bringing sustainable algae-based products and solutions to the market IA - 17M€**

**LOCALITY**– Nature-positive aLgae-based fOod, agriCulture, AquacuLture and textile producTs made in North and Baltic Sea ecosYstems  
**AlgaePro BANOS**- Accelerating algae product developments in Baltic and North Sea

**Green, energy-efficient and sustainable small-scale fishing fleets IA- 12M€**

**SEAGLOW**- Sustainable Energy Applications for Green and Low-impact Operation of small-scale fishing boats in the Baltic and North Sea basins  
**REFEST**- Retrofitting of fishing fleets with low payback time and easy to deploy solutions for footprint and GHG emissions reduction  
**H2-Seas**- Coastal Fishing Vessels Powered by Zero Emission Hydrogen Fuel Cell



# 2024 TOPICS

- **HORIZON-MISS-2024-OCEAN-01-01:** European Blue Parks – Offshore marine protected areas
- **HORIZON-MISS-2024-OCEAN-01-02:** Danube river basin lighthouse – Protection and restoration of migratory fish habitats
- **HORIZON-MISS-2024-OCEAN-01-03:** Atlantic and Arctic sea basin lighthouse, Mediterranean Sea basin lighthouse, Baltic and North Sea basin lighthouse - Reducing the environmental impacts of fisheries on marine species and habitats
- **HORIZON-MISS-2024-OCEAN-01-04:** Science for Community – Building the marine Citizen Science data network of the future to valorise data coming from the ocean and increase engagement
- **HORIZON-MISS-2024-OCEAN-01-05:** Our Blue Future – Co-designing a future vision of a restored ocean and water system in the EU by 2030 and 2050
- **HORIZON-MISS-2024-OCEAN-02-01:** Community-led actions to restore our ocean, seas and waters
- **HORIZON-MISS-2024-OCEAN-02-02:** Support for the Coalition of waterfront cities, regions and islands for Mission Ocean and Waters



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# Stakeholders engagement



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## Recent Events to engage with stakeholders

- **UN Ocean Decade Conference**, Barcelona, 10-12 April 2024

[2024 Ocean Decade Conference | UNESCO](#)

- **Our Ocean – An Ocean of potential**, Athens, 15-17 April 2024

[Our Ocean - An Ocean of Potential \(ourocean2024.gov.gr\)](#)



NEWS ARTICLE | 16 April 2024 | Directorate-General for Research and Innovation | 2 min read

Four ports have received awards for their contributions to 'Mission Ocean' at the 9th Our Ocean Conference in Athens





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## Recent Events to engage with stakeholders 2/2

- **European Maritime Days, Svendborg**  
**30-31 May 2024**
  - EMD Cities Network roundtables (Brest, Cork, Den Helder, Ravenna, Svendborg)
- **Digital Twin of the Ocean Forum, 13 June Brussels**



European Commission unveils European Digital Twin of the Ocean prototype







# Recent Events

- **G7 Science & Technology high-level Event, Bologna 11 July 2024**

Mediterranean and Atlantic Ocean Health and Coastal Resilience. A strategic initiative for the Mediterranean at the crossroad with the Atlantic in the frame of the EU Mission Restore our Ocean and Waters by 2030

NEWS ARTICLE | 11 July 2024 | Directorate-General for Research and Innovation | 3 min read

## G7 agree to strengthen open and safe international science cooperation





# Upcoming Events

- **From Danube source to Black Sea – Healthy Waters and healthy life**  
Burgas, 15 Oct 2024; BRIDGE Black Sea High Tech Summit, SBEP  
Sustainable Blue Economy for the Black Sea, Sofia 16-17 Oct
- **Mission Ocean and Waters Forum 2025, Brussels 4 March 2025 and related events**

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What is Food 2030?

Food 2030 deployment via Horizon Europe

Outcomes of the Food 2030 Conference - Green and Resilient Food Systems





# What is Food 2030?

FOOD  
2030

- Food 2030 supports the transition towards sustainable, healthy and inclusive food systems.
- It is in line with, and supports the goals of the **European Green Deal**, **Farm to Fork strategy** and **Bioeconomy strategy**.
- Food 2030 is underpinned by the need to foster a **multi-actor** and **systemic approach** to research and innovation capable of **delivering co-benefits** for people's health, our climate, our planet and communities.



#FOOD2030EU



# Timeline

□ Food 2030 milestones and events

□ EU policy milestones

— Horizon 2020

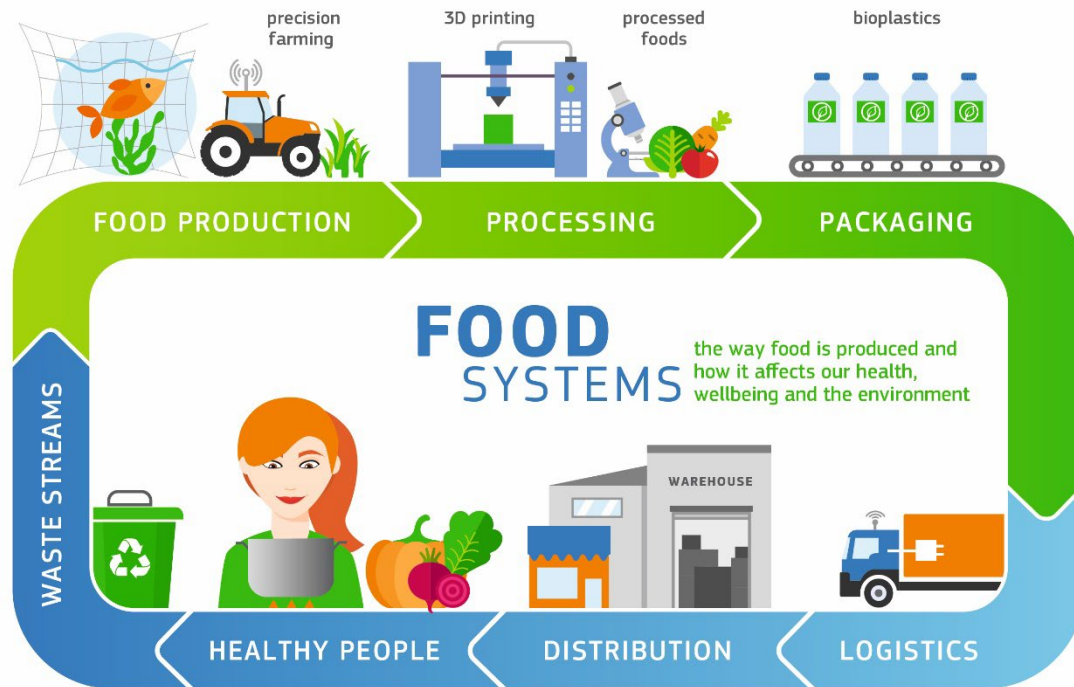
— Horizon Europe



# Food 2030: EU R&I Policy Framework future-proofing our food systems




## Priorities



-  **NUTRITION** for sustainable and healthy diets
-  **CLIMATE** smart and environmentally sustainable food systems
-  **CIRCULARITY** and resource efficiency of food systems
-  **INNOVATION** and empowerment of communities

### Drivers

-  **Research breakthroughs**
-  **Innovation and Investment**
-  **Open Science**
-  **International collaboration**



- Need for a systemic approach to future-proofing food systems by structuring, connecting and scaling-up R&I
- To provide **evidence** for policies and **solutions** (knowledge, methods, technologies, services, business models, etc) addressing 4 priorities.



# FOOD 2030 Research and Innovation

Pathways for action 2.0

Research and innovation policy as a driver for sustainable, healthy, climate-resilient and inclusive food systems



Research and Innovation

# New Food 2030 Pathways for action 2.0 report

# FOOD 2030

NUTRITION

COMMUNITIES

CIRCULARITY

CLIMATE

Over 100 Projects  
Over 760 M EUR



Systemic approach – delivering co-benefits, inter/transdisciplinary and multi-actor

Placed-based approaches for testing, demonstrating, experimenting, deploying, partnering, learning, sharing !!

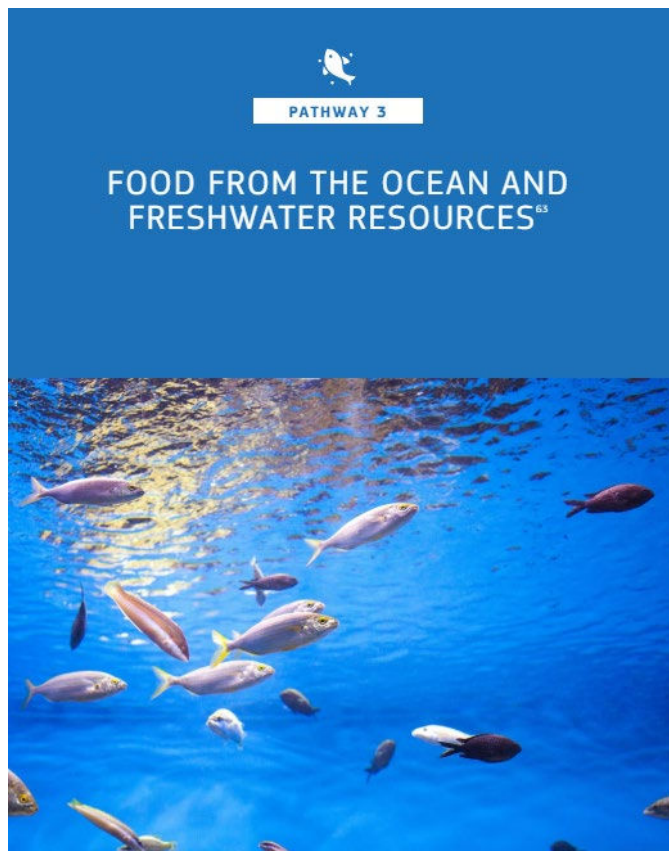
All types of innovation

#FOOD2030EU

FOOD 2030 Pathways	Nutrition	Climate	Circularity	Communities
PATHWAY 1 GOVERNANCE FOR FOOD SYSTEMS CHANGE	+++	+++	+++	+++
PATHWAY 2 URBAN FOOD SYSTEMS TRANSFORMATION	++	+++	+	+++
PATHWAY 3 FOOD FROM THE OCEAN & FRESHWATER RESOURCES	++	+++	+++	+++
PATHWAY 4 ALTERNATIVE PROTEINS FOR DIETARY SHIFT	+++	+++	++	+++
PATHWAY 5 FOOD WASTE & RESOURCE-EFFICIENT FOOD SYSTEMS	++	+++	+++	++
PATHWAY 6 THE MICROBIOME WORLD	+++	+++	++	+++
PATHWAY 7 NUTRITION & SUSTAINABLE HEALTHY DIETS	+++	++	+	++
PATHWAY 8 FOOD SAFETY SYSTEMS OF THE FUTURE	+++	+++	++	+++
PATHWAY 9 FOOD SYSTEMS AFRICA	+++	+++	+++	+++
PATHWAY 10 DATA & DIGITAL TRANSFORMATION	+++	+++	+++	+++
PATHWAY 11 ZERO-POLLUTION FOOD SYSTEMS	++	+++	+++	+++

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## FOOD FROM THE OCEAN AND FRESHWATER RESOURCES<sup>83</sup>

### Investments

From 2018 onwards, under Horizon 2020 societal challenge 2, the EU has invested more than EUR 100 million in this area by supporting 15 projects. In the first 2 years of Horizon Europe, more than EUR 75 million were invested in seafood research under cluster 6, including under the EU mission 'Restore our ocean and waters by 2030', supporting 13 projects. An additional amount of approximately EUR 56 million is also expected as result of the 2023 and 2024 Horizon Europe topics related to this pathway.

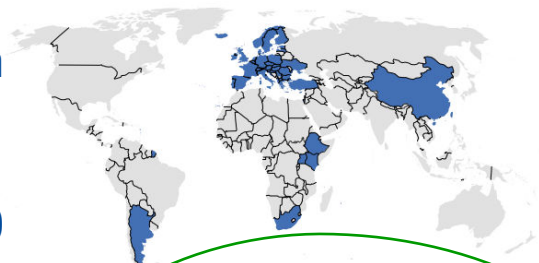
### 3. BARRIERS AND LOCK-INS

- Complex global seafood supply chains, in some cases dominated by a few powerful actors.
- Gaps in biological and ecological knowledge of aquatic organisms and ecosystems.
- Lack of effective international collaboration for the management of shared fish stocks.
- Lack of infrastructure for technology uptake by the seafood sector in several areas in Europe.
- Poor environmental performance and the impact of some aquaculture practices, for example on surrounding water quality.
- Cumbersome and slow administrative procedures for authorising aquaculture investments.
- High insurance, installation and monitoring costs for mariculture (nearshore and offshore), discouraging small-scale investors.
- Lack of familiarity with seafood consisting of photosynthetic and low-trophic aquatic organisms; lack of know-how on how to cook, prepare and combine them; and, in general, negative consumer perceptions of farmed seafood.
- Limited consideration of seafood in the global food systems operating with a silo approach.

# Urban Food Systems Transformation

- EU funded projects cover **154 city initiatives** in 41 countries across the world\*
- Under the Food 2030 family we have **7 H2020 and Horizon Europe projects** covering with focus areas ranging from citizen engagement, local policy development and development and use of technology. Many projects strongly make use of **place-based solutions** via **policy and living labs**
- **Future R&I needs** are for example:
  - Developing synergies and increasing connection across the rural-urban interface
  - Fostering more hands-on living labs and co-creation spaces

Figure 4.1 Countries – Cities 2030 projects



FoodE

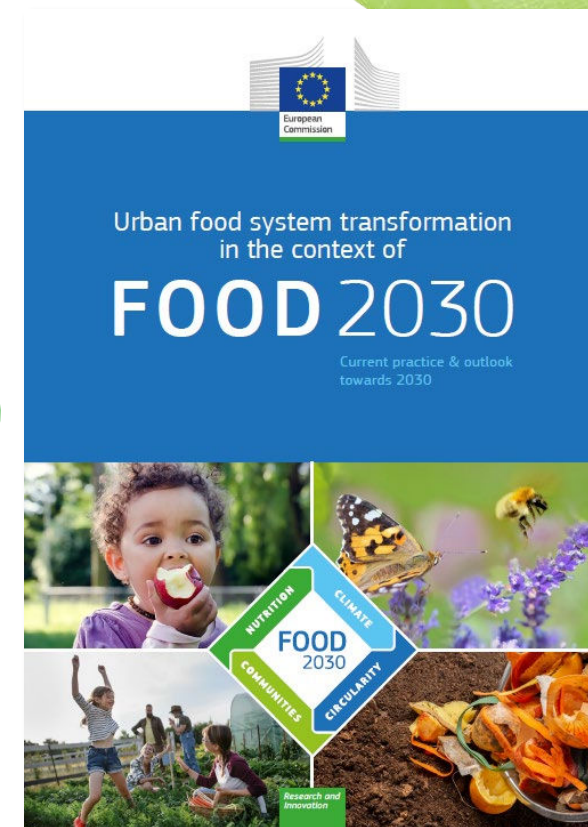
Cities2030

FoodSHIFT2030

FOOD TRAILS CULTIVATE

FUSILLI

FOODCLIC



\*Link to report: <https://op.europa.eu/en/publication-detail/-/publication/7a3817c1-fdce-11ed-a05c-01aa75ed71a1/language-en>, numbers based on survey to 22 EU funded projects



# FOOD 2030 Publications





# Food 2030 deployment via Horizon Europe





# HORIZON EUROPE

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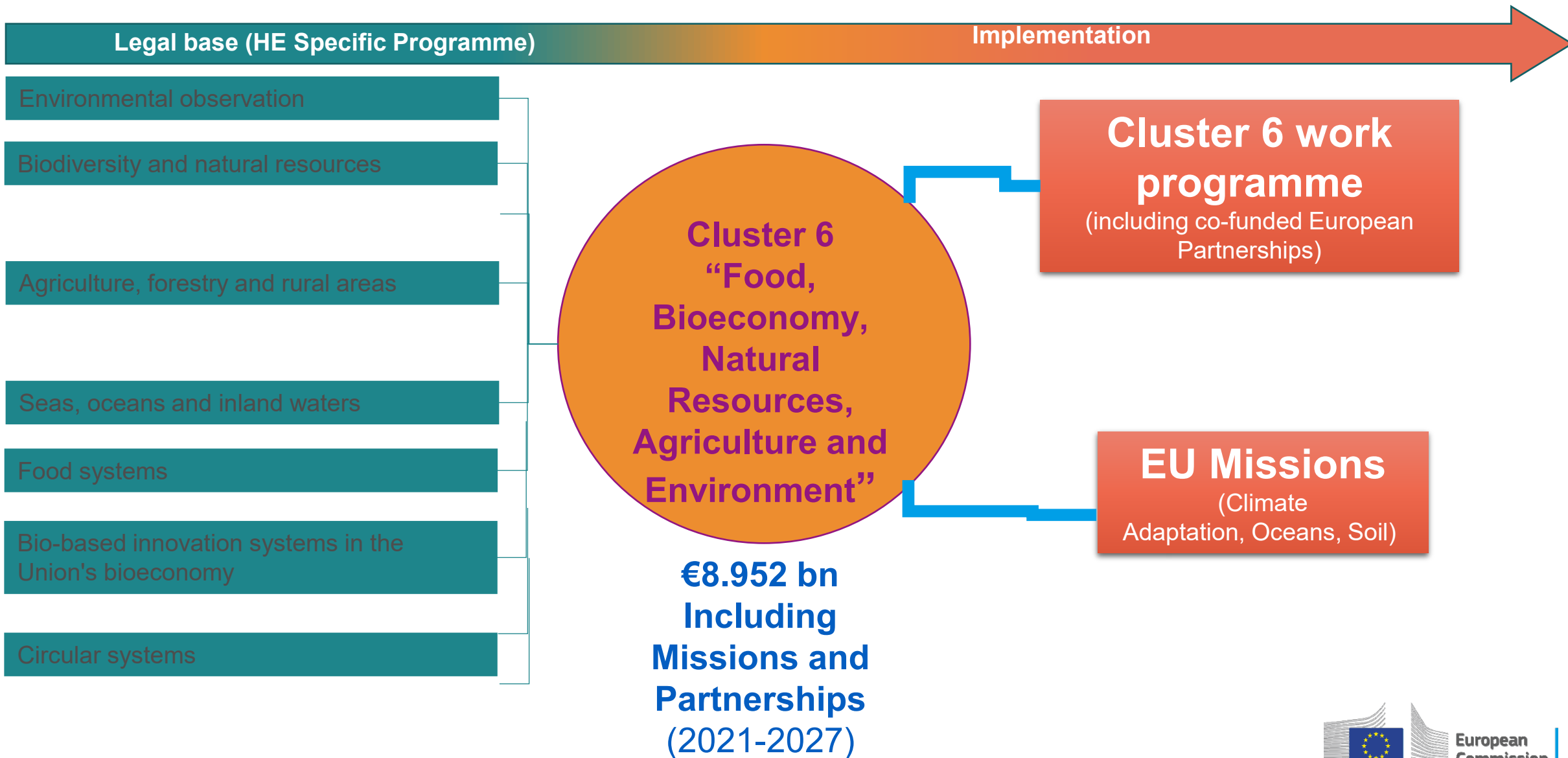
## THE EU RESEARCH & INNOVATION PROGRAMME

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2021 – 2027



# Overview



# Partnership on Sustainable Food Systems for People, Planet & Climate

- Objective to align and boost R&I investments to transform food systems for co-benefits (F2F, GD relevant)
- Secures long-term commitment and funding by MS through clearly defined SRIA
- Work started in Oct 2019, kick-off in June 2024
- The Standing Committee for Agricultural Research (SCAR) “Food Systems Working Group”, has been the Convening platform joining forces with preparatory action of **FoodPaths**, CSA



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# Outcomes of the Food 2030 Conference “Green and Resilient Food Systems” 4-5 December 2023







BRUSSELS

4 – 5 Dec 2023

# FOOD 2030

Green & Resilient  
Food Systems

# The conference in numbers

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2030

- Over the course of 2 days:
  - 14 panel sessions
  - 4 keynotes
  - 5 high-level speeches
  - 64 speakers
  - 400 in-person participants
  - 1065 online connections
- “Food Village” exhibition with 13 stands of projects and other initiatives



#FOOD2030EU

# Objectives of the conference

FOOD  
2030



*To provide an overview of Food 2030 achievements, from its inception in 2016*

*To look ahead at how R&I can address current and future challenges, by ensuring that food systems are resilient, sustainable, inclusive and healthy*



*To bring together public authorities, industry, academia, youth, civil society and international organisations*

*To launch the new report “Food 2030 Pathways for action 2.0”*



# Conclusions

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Given the policy context, urgency and complexity of food systems transitions **R&I has a more important role than ever.**

**R&I policy is a neutral multi-actor convening space to address systemic issues** and meet the ambitions of the Green Deal

**Horizon Europe provides significant funding and directionality** in support of a systemic transition towards resilient and sustainable food systems





# The EU's understanding of the Bioeconomy

All sectors and associated services and investments that produce, use, process, distribute or consume biological resources (animals, plants, micro-organisms, including organic waste), including ecosystem services.

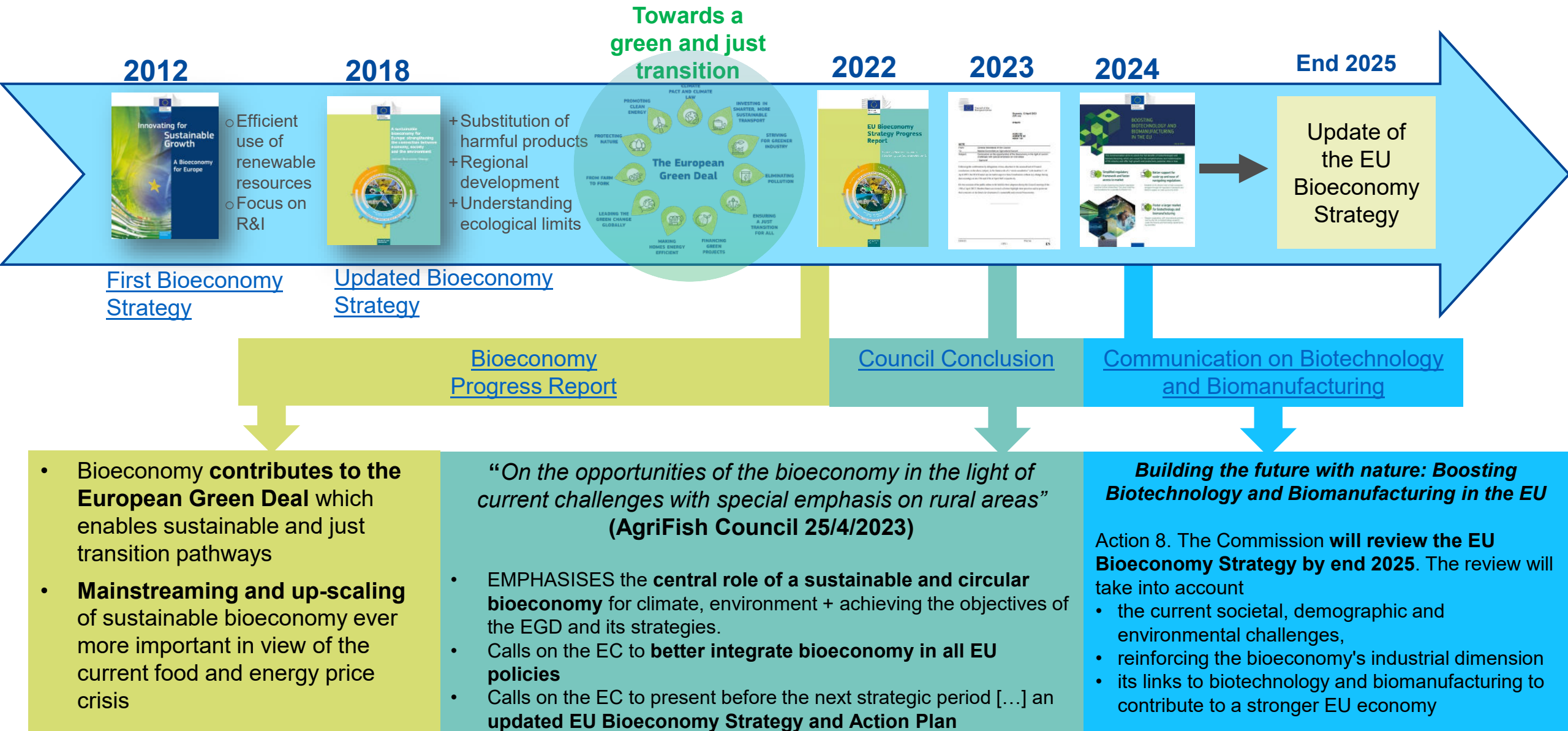
The EU Bioeconomy Strategy takes a **holistic approach** focusing on all three dimensions of sustainability.

**Cross-sectoral** policy framework.  
It addresses **five different objectives**.

strategic view on **trade-offs** (e.g. scarce biomass),  
co-benefits (e.g. for biodiversity)



# EU Bioeconomy Strategy timeline



- Bioeconomy **contributes to the European Green Deal** which enables sustainable and just transition pathways
- **Mainstreaming and up-scaling** of sustainable bioeconomy ever more important in view of the current food and energy price crisis

“On the opportunities of the bioeconomy in the light of current challenges with special emphasis on rural areas”  
**(AgriFish Council 25/4/2023)**

- EMPHASISES the **central role of a sustainable and circular bioeconomy** for climate, environment + achieving the objectives of the EGD and its strategies.
- Calls on the EC to **better integrate bioeconomy in all EU policies**
- Calls on the EC to present before the next strategic period [...] an **updated EU Bioeconomy Strategy and Action Plan**

**Building the future with nature: Boosting Biotechnology and Biomanufacturing in the EU**

Action 8. The Commission will review the **EU Bioeconomy Strategy by end 2025**. The review will take into account

- the current societal, demographic and environmental challenges,
- reinforcing the bioeconomy's industrial dimension
- its links to biotechnology and biomanufacturing to contribute to a stronger EU economy



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# Thank you!

[Restore our Ocean and Waters - European Commission \(europea.eu\)](https://europea.eu)

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**#EUmissions**

**#HorizonEU**

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