
HORIZON EUROPE

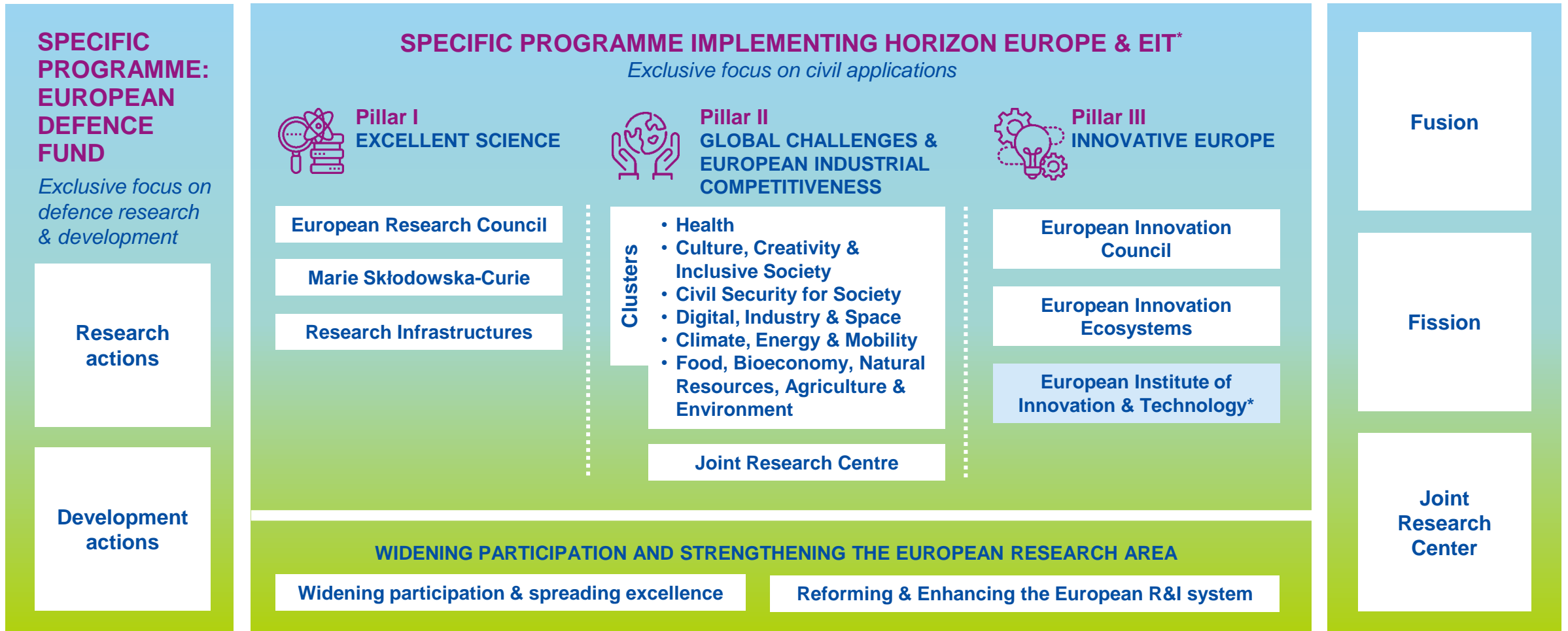
Strategic aspects and policies shaping Cluster 6



Tiago Freitas
Policy officer, DG Research and Innovation

HORIZON EUROPE

EURATOM



* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme



Cluster 6

Work Programme 2021-2022

Next deadline for proposals: 15 February

October 2021

Cluster 6 Expected impacts shape the WP structure

Strategic Plan

Work Programme




Impact 1 Climate neutrality and adaptation to climate change

- Destination: Land, oceans and water for climate action



Impact 2 Preservation and restoration of biodiversity and ecosystems

- Destination: Biodiversity and ecosystem services



Impact 3 Sustainable and circular management of natural resources; tackling pollution; bioeconomy

- Destination: Circular economy and bioeconomy sectors
- Destination: Clean environment and zero pollution



Impact 4 Food and nutrition security for all from sustainable food systems from farm to fork

- Destination: Fair, healthy and environmentally-friendly food systems from primary production to consumption



Impact 5: Balanced development of rural, coastal and urban areas

- Destination: Resilient, inclusive, healthy and green rural, coastal and urban communities



Impact 6: Innovative governance models enabling sustainability, environmental observation

- Destination: Innovative governance, environmental observations and digital solutions in support of the Green Deal





Biodiversity Strategy for 2030

A new Circular Economy Action Plan

- Strategy on the sustainable use of chemicals
- Clean Air and Water Action Plans

Preserving Europe's natural capital

Transition to a Circular Economy

A zero pollution Europe

- TBD with the commissioner-designate

Sustainable Transport

Farm to Fork

Farm to Fork Strategy

- Revising 2030 Climate targets
- Extending ETS
- Climate Pact
- Climate Law
- Carbon Border Tax

Achieving Climate Neutrality

The transformation of agriculture and rural areas

- Vision for Inclusive Rural Areas
- Africa Europe agenda

- Review Energy Legislation
- European Framework for gas
- Review Energy Taxation directive

Clean, Reliable and Affordable energy

Towards a modernised and simplified CAP

CAP reform proposal

Financing the transition

Leave no one behind (Just Transition)

- European Investment Bank as European Climate Bank
- Sustainable Europe Investment Plan
- Green Financing Strategy
- Mainstreaming climate transition and sustainability in the MFF

- Just Transition Instrument, including the Just Transition Fund
- Mainstreaming the Just Transition in the MFF

CLIMATE
PACT AND CLIMATE
LAW

PROMOTING
CLEAN
ENERGY

INVESTING IN
SMARTER, MORE
SUSTAINABLE
TRANSPORT

Biodiversity and
ecosystem
services

PROTECTING NATURE

Cluster 6
&

STRIVING
FOR GREENER
INDUSTRY

Circular economy
and bioeconomy
sectors

The European Green Deal

FROM FARM
TO FORK

ELIMINATING
POLLUTION

Clean environment
and zero pollution

Fair, healthy and
environmentally-friendly
food systems from
primary production to
consumption

LEADING THE
GREEN CHANGE
GLOBALLY

ENSURING
A JUST TRANSITION
FOR ALL

Resilient, inclusive,
healthy and green
rural, coastal and
urban communities

All destinations

MAKING
HOMES ENERGY
EFFICIENT

FINANCING
GREEN
PROJECTS

Innovative governance,
environmental observations
and digital solutions in
support of the Green Deal

Cluster 6 Budget over 7 years

Overall budget	9 Bio
Operational budget	8,4 Bio
After mission « taxation » 10%	7,5 Bio
CBE partnership	1 Bio
Available budget for the WP 7 years	6,5 Bio

Cluster 6: Work Programme 2021-2022 budget distribution per destination

Destination	Number of topics	Budget [mln EUR]	% Share
Biodiversity and ecosystem services	36	375,5	20%
Fair, healthy and environmentally-friendly food systems from primary production to consumption	39	416,5	22%
Circular economy and bioeconomy sectors	22	268,5	14%
Clean environment and zero pollution	14	116	6%
Land, oceans and water for climate action	16	193	10%
Resilient, inclusive, healthy and green rural, coastal and urban communities	13	128	7%
Innovative governance, environmental observations and digital solutions in support of the Green Deal	43	370	19%
Other actions	12	38,5	2%
Total	198	1906	100%

DESTINATION 1

BIODIVERSITY AND ECOSYSTEM SERVICES



Elements of the EU Biodiversity Strategy



Protect Nature



Enable Transformative Change



Restore Nature



EU For An Ambitious Global Agenda



To remember...

TURN AT LEAST **30%** OF EU'S LAND AND **30%** OF SEAS INTO EFFECTIVELY MANAGED AND COHERENT PROTECTED AREAS

RESTORE **DEGRADED ECOSYSTEMS** AND STOP ANY FURTHER DAMAGE TO NATURE

RESTORE AT LEAST **25 000 KM** OF THE EU'S RIVERS TO BE FREE-FLOWING

REDUCE THE USE AND RISK OF PESTICIDES BY AT LEAST **50%**

TACKLE **BYCATCH** AND SEABED DAMAGE

REVERSE THE DECLINE OF **POLLINATORS**

ESTABLISH BIODIVERSITY-RICH LANDSCAPE FEATURES ON AT LEAST **10%** OF FARMLAND

MANAGE **25%** OF AGRICULTURAL LAND UNDER ORGANIC FARMING, AND PROMOTE THE UPTAKE OF AGRO-ECOLOGICAL PRACTICES

PLANT OVER **3 BILLION** DIVERSE, BIODIVERSITY RICH TREES.



Destination 1 - Expected impacts

Biodiversity and ecosystem services

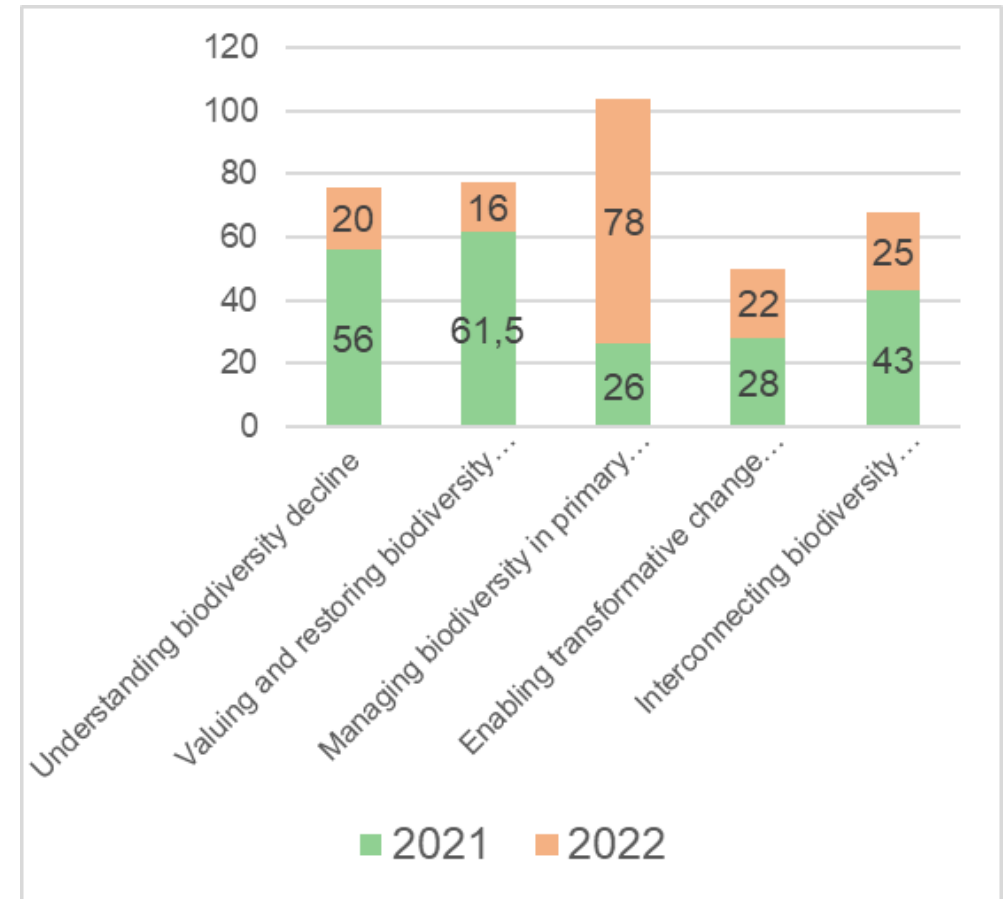
- Biodiversity decline, its main direct drivers and their interrelations are better understood and addressed.
- Biodiversity and natural capital are integrated into public and business decision-making at all levels for the protection and restoration of ecosystems and their services.
- Europe builds competitive sustainability and tackles climate change and natural disasters through the deployment of nature-based solutions.
- The interrelations between biodiversity, health, food, soil, water, air and climate are better known.
- Practices in agriculture and forestry support biodiversity and the provision of other ecosystems services.
- Access to a wider range of crops and breeds with a broadened genetic base is improved in line with global biodiversity commitments.
- Approaches for enabling transformative changes in society are developed: 'do not harm' biodiversity policies become mainstream in all sectors.
- Biodiversity research is interconnected across Europe and supports national, EU and international policies.

Destination 1: Biodiversity and ecosystem services

- Understanding biodiversity decline
- Valuing and restoring biodiversity and ecosystem services
- Managing biodiversity in primary production
- Enabling transformative change on biodiversity
- Interconnecting biodiversity research and supporting policies, including **European Partnership Rescuing Biodiversity to Safeguard Life on Earth starting in 2021 (Programme co-fund action)**

RIA	IA	CSA	Other (part)	Total
20	6	8	2	36

Budget (mIn EUR)





1.
Understanding
Biodiversity
decline

Understanding and addressing Biodiversity decline - data and direct drivers

Biodiversity data, tools, models & scenarios

Generating and integrating **data and knowledge from multiple origins** (such as molecular, phylogenetic, socio-historical, sensors, satellites, etc), on species status, ecosystem condition and specific species groups (i.e. wild pollinators). Developing **tools, models and scenarios**.

Support to the Biodiversity Knowledge Centre.

- *Genomics and taxonomic technologies (e.g. eDNA, barcoding) to tackle intra-specific and ecosystem diversity, and for fast identification of endangered wildlife, pests, and disease vectors.*
- *European natural history museums network: open access taxonomic data on animals, plants and fungi.*
- *Improving biodiversity modelling and scenarios*

Effect of direct drivers of biodiversity loss: land use change, overexploitation, climate change, invasive species, pollution

- *Innovative methods to manage pathways of unintentional introduction of alien species*
- *Cumulative effects of acidification, climatic stress factors and anthropogenic pressures on marine ecosystems*
- *Consolidate and improve scientific knowledge in the field of fisheries*



Assessing, Valuing and Restoring Ecosystems and Natural Capital

Assess the status and trends of natural capital, in particular ecosystem services.

- Improve the knowledge base on **ecosystems and their services** in Europe and identify trends.

Restore: Large scale test/pilot/demonstration activities

- **Science-based Spatial Planning** and Ecosystem-based management for protected areas (including marine areas)
- Large-scale testing of Protected Areas as restoration for rewilding and restoring biodiversity, ecosystems and resilience capacity to climate change.
- Large-scale testing of holistic ecosystem-based management in non-protected areas for bd, health and climate resilience

Natural Capital Accounting - Integrating the value of natural capital and ecosystem services into decision making

- Facilitating the **incorporation of natural capital accounting** in European and national decision-making to assess the effectiveness of existing biodiversity-related policies.
- Measuring and **valuing natural capital changes** in public and private decision making. Exploring solutions to improve the biodiversity impact of retailers in global value chains.

3. Nature-Based Solutions



R&I actions on Nature-Based Solutions (NBS) will:

Demonstrate and replicate systemic solutions to address, namely:

- **climate change mitigation**
 - **climate change adaptation**
 - **natural disasters**
 - **water management**
- **Restore ecosystems and enhance their services, contributing to better ecological connectivity**
 - **Contribute to a more biodiversity-friendly and biodiversity-based agriculture** through place-specific NBS based on agro-ecosystem services and agro-biodiversity
 - **Provide systemic solutions addressing the complex interplays** between the protection, restoration and enhancement of biodiversity; and the challenges of health, climate, energy, biomass provision including food, and water (including synergies and trade-offs)

Through:

- **Development and demonstration** of innovative and resilient solutions;
- **Analysis and mitigation of trade-offs** for higher performance and resilient NBS;
- **Quantitative assessment, mapping and modelling** of NBS for specific societal challenges; **performance** analysis;
- **Mainstreaming and upscaling** of solutions; digital, regulatory framework and standards, education, market, behavioural and socio-economic areas; **business and financial models** for NBS.

4.
Transformative
Change



Transformative Change – tackling indirect drivers of biodiversity loss

Understand the role of transformative change in biodiversity action

- Assessing the nexus of extraction, production, consumption, trade and behaviour patterns

Addressing the indirect drivers for biodiversity loss

- Quantify impacts and develop solutions

Accelerating biodiversity-relevant transformative changes in our society

- Impacts and opportunities of digital transformation, emerging technologies and social innovation on biodiversity.
- Citizen's toolkit and education for transformative change.
- Policy mixes, governance and decision-making tools for achieving the necessary transition for biodiversity.

5. Connecting
Research for
better Policies



Interconnecting Biodiversity Research for Better Policies

- European Co-Funded Partnership: **'Rescuing biodiversity to safeguard life on Earth'**
- Support to Green Deal / EU Biodiversity Strategy for 2030
- Support to IPBES / IPCC
- Science-policy mechanism





Biodiversity and human health

What else is out there? Preparing for pandemics

- Molecular and phylogenetic characterisation of **potential emerging pathogens and their hosts** in natural areas for use as pre-leads for future vaccines and antimicrobials.
- Relationship of **biodiversity loss, land use change and ecosystems dynamics with the evolution and spread of microbiomes** within the broader context of socio-economic driving forces, climate change, public health, and increasing resilience.

Nature Therapy

A bridge between health, wellbeing, biodiversity conservation and NBS.

- Quantify and demonstrate **health benefits from biodiversity** and its **integration into medical practice, therapies, health policy, hospital architecture, urban planning, etc.**
- Facilitating **transformational changes in health business**, building on the OneHealth approach at EU and global levels



Managing Biodiversity in Primary production

Preservation, management and use of genetic resources

Enhancing knowledge and management of agro/forest biodiversity and ecosystems' services

cross-sectoral

- Joining forces for **ex-situ and in-situ conservation of genetic resources** (international cooperation)
- Pre-breeding and breeding for diversity
- Specific actions on genetic resources and **climate change**
- Supporting breeding in **livestock sector** to improve health, longevity and robustness for climate adaptation and mitigation



Partnership
Animals and health

sectoral

- Fostering **organic farming** breeding research
- Boosting breeding for a sustainable and resilient **EU plant protein sector**
- Boosting breeding for the **EU fruit and vegetable sectors**
- Improving the genetic diversity of **forests**

- Better understanding and using **functional biodiversity** (incl. links between managed and natural biodiversity)
- Promoting **agrobiodiversity in space and time** (e.g., multi-cropping, rotations)
- Investigating **soil biodiversity** and its various services including support to **above ground biodiversity**
- Improving the **management of forest for biodiversity**
- Investigating the **synergies and trade-offs** between **forest biodiversity and climate change**
- Specific R&I activities on restoration of **biodiversity** (following the upcoming Biodiversity Strategy)



Managing Biodiversity in Primary production

“Biodiversity and ecosystem services underpin productivity and resilience of agriculture and forestry; their preservation and restoration at farm, forest and landscape level is therefore essential. [...]”



*“[...] of more than **14 000 edible plant species**, only **150–200** are used by humans with **only three** (rice, maize, and wheat) contributing **60%** of the calories consumed by humans [...]”*

Highlights 2022

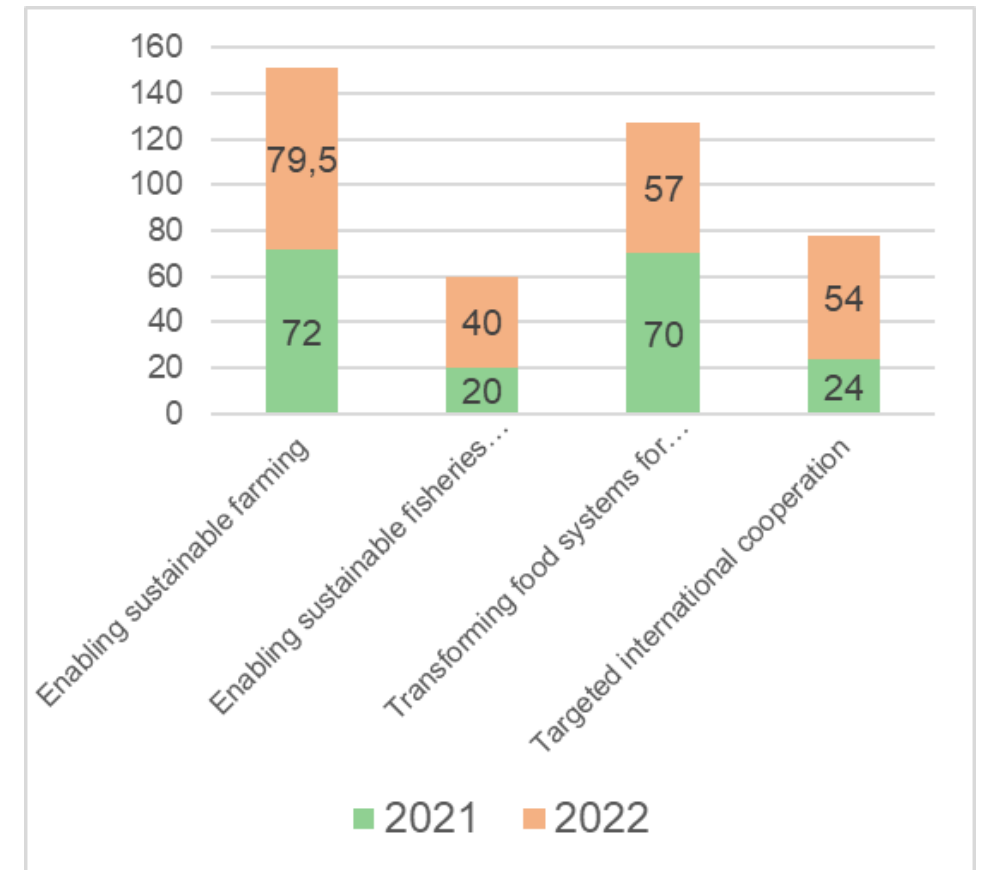
- HORIZON-CL6-2022-BIODIV-01-01: Observing and mapping biodiversity and ecosystems, with particular focus on coastal and marine ecosystems, RIA
- HORIZON-CL6-2022-BIODIV-01-02: Building taxonomic research capacity near biodiversity hotspots and for protected areas by networking natural history museums and other taxonomic facilities (IA)
- HORIZON-CL6-2022-BIODIV-01-05: Intercropping – understanding and using the benefits of complexity in farming and value chains (RIA)
- HORIZON-CL6-2022-BIODIV-01-06: Monitoring and effective measures for Agrobiodiversity (RIA)
- HORIZON-CL6-2022-BIODIV-01-07: Protection and sustainable management of forest genetic resources of high interest for biodiversity, climate change adaptation, and forest reproductive materials (RIA)
- HORIZON-CL6-2022-BIODIV-02-01-two-stage: Maintaining and restoring pollinators and pollination services in European agricultural landscapes (IA)
- HORIZON-CL6-2022-BIODIV-02-02-two-stage: Boosting breeding for a sustainable, resilient and competitive European legume sector (IA)

Destination 2: Fair, healthy and environmentally-friendly food systems from primary production to consumption

- Enabling sustainable farming
- Enabling sustainable fisheries and aquaculture
- Transforming food systems for health, sustainability and inclusion
- Targeted international cooperation

RIA	IA	CSA	Total
27	9	3	39

Budget (mIn EUR)



Destination 2: Fair, healthy and environmentally-friendly food systems from primary production to consumption

“Pesticides spark broad biodiversity loss...”



Reduction of dependency on chemical pesticides

- **Integrated pest management** / low-pesticide farming
- **Risk assessment** of new low-risk pesticides
- Small organisms, big effects for plants 2.0: exploiting the potential of **microbiome**
- **Alternatives to contentious pesticides**
- **Digital technology** supporting plant health, including plant protection through robotics

Skills, business models and community-led innovations for biodiverse agriculture and forestry

- **Thematic networks** with predefined themes (e.g. agro-ecology, pesticide reduction, etc.) and compiling knowledge from **EIP Operational Groups**
- **Advisory networks** on predefined themes
- Setting up **testbeds** for demos and training
- **Business models innovations** for access and benefit sharing of genetic resources
- **Community-led innovations:** local solutions to global challenges, including loss of biodiversity

Strategies and policies for biodiverse agriculture and forestry

- **Public goods** provision through digital and data technologies in the agricultural sector - designing policy measures
- Supporting **genetic resources** and (agro/forest) **biodiversity strategies** at European and global level

Destination 2: Fair, healthy and environmentally-friendly food systems from primary production to consumption

Agroecological approaches in primary production, including organic farming

*“Increased knowledge on the benefits of biodiversity-rich and pollinator friendly practices will serve to develop **farming and forestry systems based on ecological approaches** that protect, restore and enhance agrobiodiversity, natural biodiversity and ecosystem services across a range of scales.”*

- **Agroecological approaches** for:
 - mitigation and adaptation to climate change, resilient agricultural production and increasing biodiversity
 - sustainable non-chemical crop and weed/pest management and the reduction of pesticide use
- **Organic farming; agroforestry; permanent grasslands** for sustainable agriculture and to meet climate and biodiversity and climate objectives
- **Socio-economic aspects** of agroecological approaches
- **Digitalisation as enabler** of diversified and resilient agroecological farming systems

Partnership

Accelerating farming systems transition:
agroecology living labs and research infrastructures



Highlights 2022

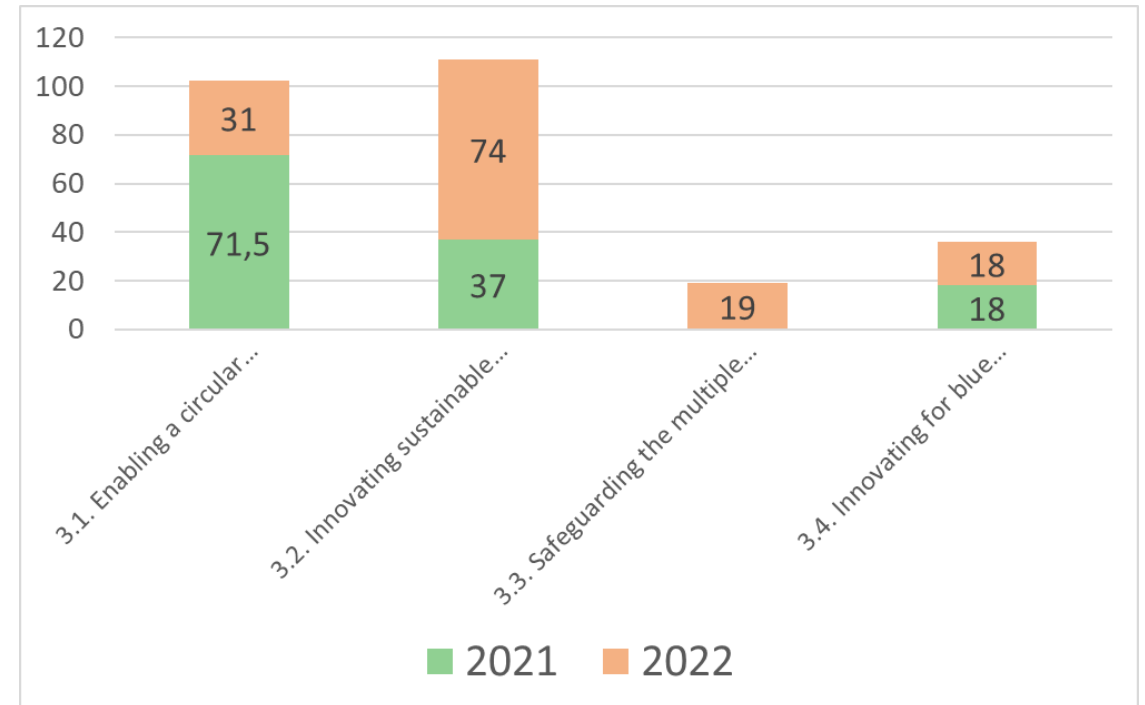
- HORIZON-CL6-2022-FARM2FORK-01-01: Risk assessment of new low risk pesticides
- HORIZON-CL6-2022-FARM2FORK-01-02: Socio-economics of pesticide use in agriculture (RIA)
- HORIZON-CL6-2022-FARM2FORK-01-04: Innovative solutions to prevent adulteration of food bearing quality labels: focus on organic food and geographical indications (IA)
- HORIZON-CL6-2022-FARM2FORK-01-05: Integrated and sustainable freshwater bioeconomy: Combining aquaculture, biodiversity preservation, biotechnology and other uses (RIA)
- HORIZON-CL6-2022-FARM2FORK-01-07: Building alternative protein-friendly sustainable and healthy food environments (IA)
- HORIZON-CL6-2022-FARM2FORK-01-08: Research and innovation for food losses and waste prevention and reduction through harmonised measurement and monitoring (RIA)
- HORIZON-CL6-2022-FARM2FORK-01-09: Microbiomes in food production systems (RIA)

Destination 3: Circular economy and bioeconomy sectors

- Enabling a circular economy transition
- Innovating sustainable bio-based systems and the bioeconomy
- Safeguarding the multiple functions of EU forests
- Innovating for blue bioeconomy and biotechnology value chains

RIA	IA	CSA	Total
6	12	4	22

Budget (mln EUR)



Highlights 2022

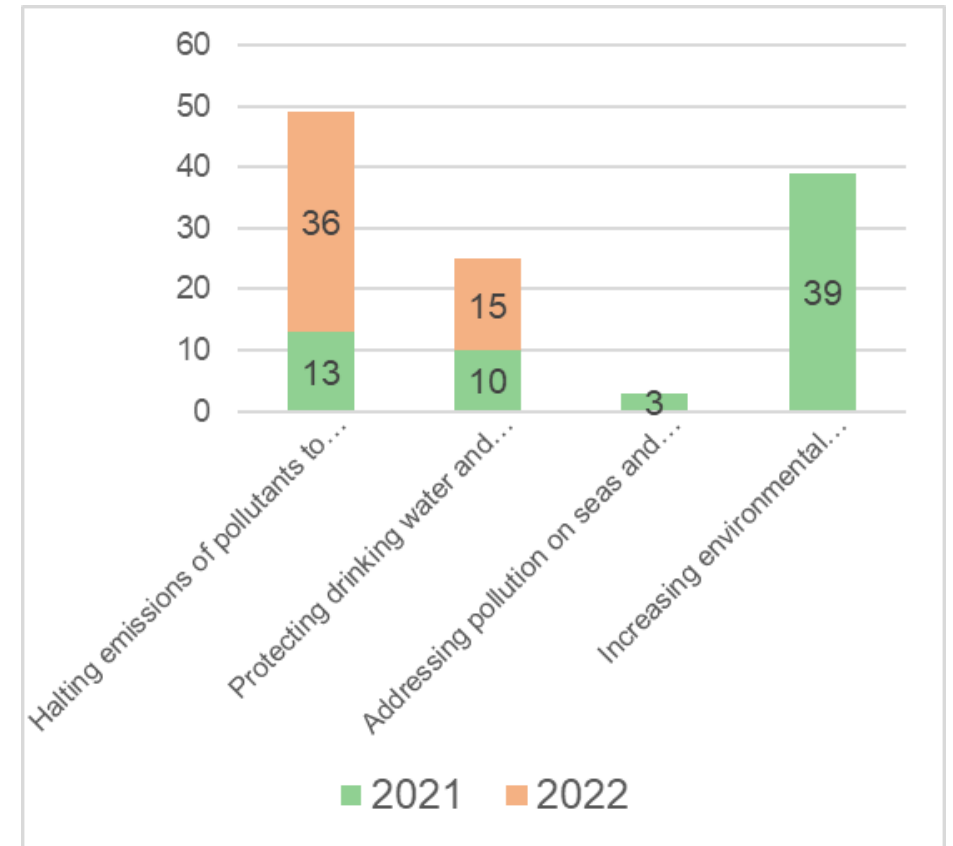
- HORIZON-CL6-2022-CIRCBIO-01-02: Marginal lands and climate-resilient and biodiversity-friendly crops for sustainable industrial feedstocks and related value chains (IA)
- HORIZON-CL6-2022-CIRCBIO-01-04: Maximising economic, environmental and social synergies in the provision of feedstock for bio-based sectors through diversification and increased sustainability of agricultural production systems (IA)
- HORIZON-CL6-2022-CIRCBIO-01-06: Strengthening the European forest-based research and innovation ecosystem (RIA)
- HORIZON-CL6-2022-CIRCBIO-01-07: Marine microbiome for a healthy ocean and a sustainable blue bioeconomy (RIA)
- HORIZON-CL6-2022-CIRCBIO-02-01-two-stage: Integrated solutions for circularity in buildings and the construction sector (IA)
- HORIZON-CL6-2022-CIRCBIO-02-03-two-stage: Sustainable biodegradable novel biobased plastics: innovation for sustainability and end-of-life options of plastics (IA)

Destination 4: Clean environment and zero pollution

- Halting emissions of pollutants to soils and waters
- Protecting drinking water and managing urban water pollution
- Addressing pollution on seas and ocean
- Increasing environmental performances and sustainability of processes and products

RIA	IA	CSA	Total
7	3	4	14

Budget (mIn EUR)



Zero Pollution action plan



- On 12 May 2021, the European Commission adopted the EU Action Plan: "[Towards a Zero Pollution for Air, Water and Soil](#)".
 - *Investments in clean and sustainable design, circular economy business models, cleaner transport and mobility, low-emission technologies, nature-based solutions and sustainable digitalisation offer strong opportunities to consolidate EU leadership in green growth, while reducing inequalities, creating jobs and enhancing collective resilience.*
- This action plan sets out key actions for 2021-2024 and presents some specific targets to achieve by 2030 (on noise, air pollution, pesticides, plastics and waste generation)



- Upcoming **review** of the Urban Waste Water Treatment Directive (UWWTD) and the evaluation of the Sewage Sludge Directive will increase the ambition to **remove nutrients from wastewater and make treated water and sludge ready for reuse**;
- The review will also address:
 - **emerging pollutants** (such as microplastics and micropollutants, including pharmaceuticals);
 - **energy efficiency and carbon neutrality**
 - better application of the ‘**polluters pays**’ principle.
 - implementation of the future integrated **nutrient management action plan**

2019: evaluation of the UWWTD

2020: The European Commission has launched the roadmap for the impact assessment of the revision of the UWWTD



- 2019: [fitness check](#)
 - Largely fit for purpose. But much remains to be done to fully achieve its objectives, especially by the **Member States**.
 - The path towards full compliance with the WFD's objectives by 2027 seems very challenging.
 - The EC needs to work with Member States and help them to improve implementation at the lowest possible cost, e.g. by **“sharing best practices on green infrastructure and cost reduction of pollutants at source”**.
 - Importance of efforts to **develop networks** of key stakeholders to increase public awareness of water issues and thus better implementation on the ground.

Highlights 2022

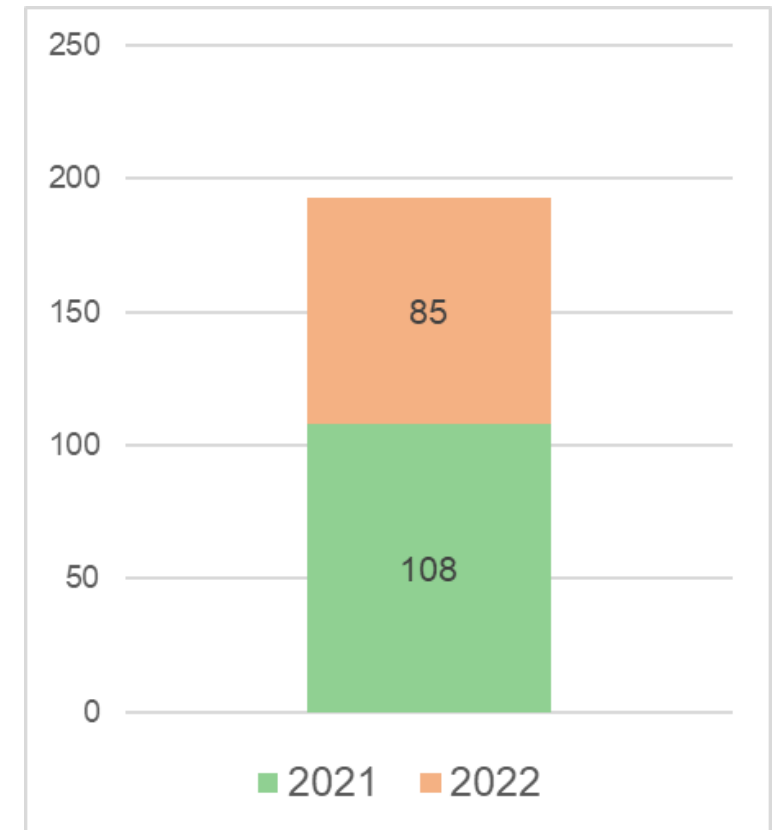
- HORIZON-CL6-2022-ZEROPOLLUTION-01-01: Preventing groundwater contamination and protecting its quality against harmful impacts of global and climate change (RIA)
- HORIZON-CL6-2022-ZEROPOLLUTION-01-02: Piloting innovative governance solutions to limit nitrogen and phosphorus emissions at the interface of rural/coastal and urban/industrial environments (IA)
- HORIZON-CL6-2022-ZEROPOLLUTION-01-03: EU-China international cooperation on nature-based solutions for nutrient management in agriculture (IA)
- HORIZON-CL6-2022-ZEROPOLLUTION-01-04: Securing drinking water quality by protecting water sources against pollution, providing innovative monitoring and treatment solutions and ensuring safe distribution(RIA)

Destination 5: Land, oceans and water for climate action

- Impacts of climate change on land and marine environments, natural resources, agriculture and food systems
- Mitigation potential of ecosystems and sectors based on the sustainable management of natural resources
- Fresh water resources, safe operating space - includes European Partnership Water Security for the Planet (Water4All) starting in 2021 (Programme co-fund action)
- Strengthening the ocean and climate nexus
- Role of agriculture to reduce and mitigate GHG emissions and to enhance carbon sinks
- Focus on large-scale deployment and uptake of solutions

RIA	IA	CSA	Other (partn)	Total
10	1	2	2	16

Budget (mIn EUR)



Highlights 2022

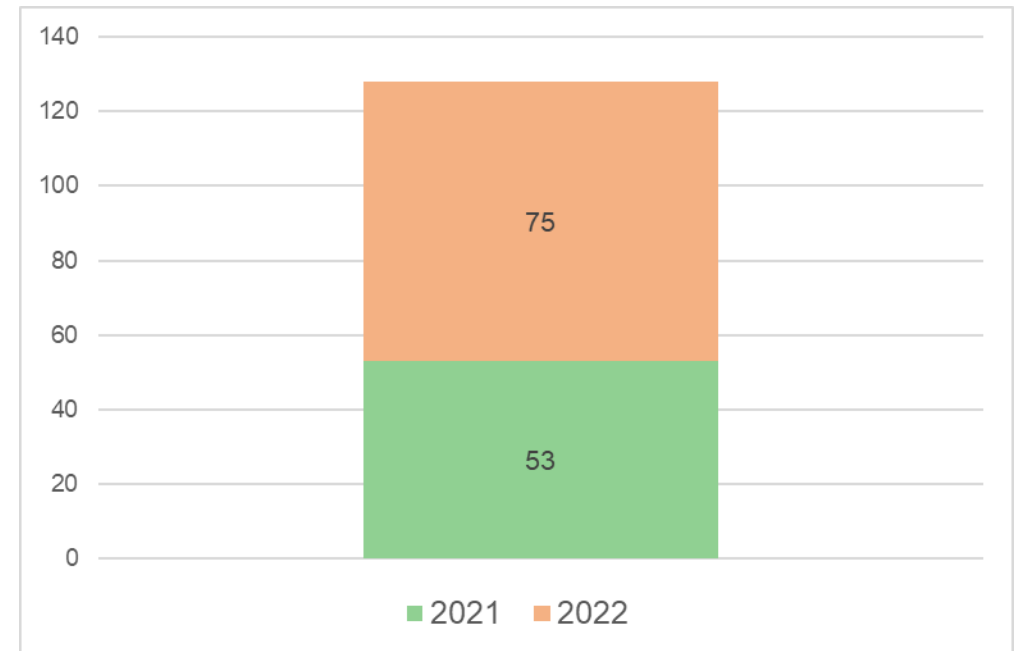
- HORIZON-CL6-2022-CLIMATE-01-01: Climate sensitive water allocation systems and economic instruments (IA)
- HORIZON-CL6-2022-CLIMATE-01-02: Understanding the oceanic carbon cycle (RIA)
- HORIZON-CL6-2022-CLIMATE-01-04: Fostering the resilience of agricultural production: from observation of changes to the development of resilience strategies (RIA)
- HORIZON-CL6-2022-CLIMATE-01-05: Forestry - European observatory of climate change impacts and demonstration network of climate smart restoration pilots (RIA)

Destination 6: Resilient, inclusive, healthy and green rural, coastal and urban communities

- Sustainable, balanced and inclusive development of rural, coastal and urban areas
- Empowerment of actors to act for transitions
- Innovative and smarter solutions for rural communities
- Coastal protection and resilience
- Tourism, recreational and leisure activity development
- Urban and peri-urban communities access to food

RIA	IA	CSA	Total
7	4	2	13

Budget (mIn EUR)



Highlights 2022

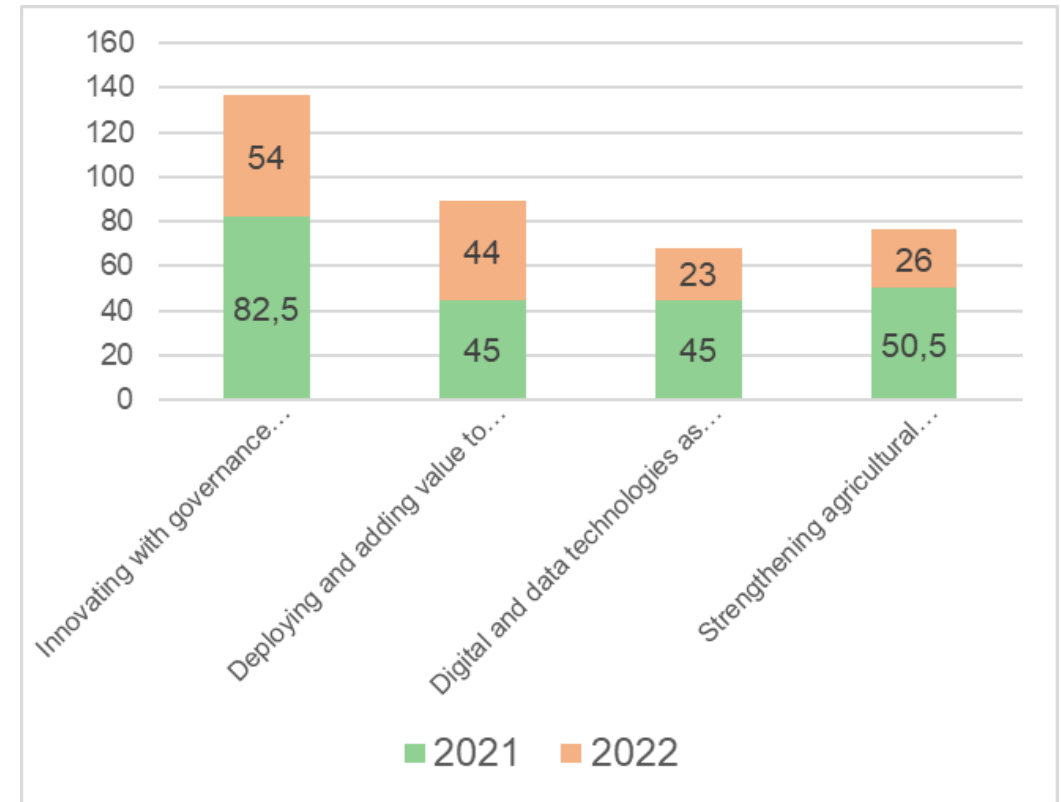
- HORIZON-CL6-2022-COMMUNITIES-01-01: Boosting women-led innovation in farming and rural areas (RIA)
- HORIZON-CL6-2022-COMMUNITIES-01-02: Assessing and improving labour conditions and health and safety at work in farming (RIA)
- HORIZON-CL6-2022-COMMUNITIES-01-03: Integration of marine ecosystem service valuation, conservation and restoration in socio-economic models (IA)
- HORIZON-CL6-2022-COMMUNITIES-01-04: Social innovation in food sharing to strengthen urban communities' food resilience (IA)
- HORIZON-CL6-2022-COMMUNITIES-01-05: Assessing the socio-politics of nature-based solutions for more inclusive and resilient communities (RIA)
- HORIZON-CL6-2022-COMMUNITIES-02-01-two-stage: Smart solutions for smart rural communities: empowering rural communities and smart villages to innovate for societal change (IA)
- HORIZON-CL6-2022-COMMUNITIES-02-02-two-stage: Developing nature-based therapy for health and well-being (RIA)

Destination 7: Innovative governance, environmental observations and digital solutions in support of the Green Deal

- Innovating with governance models and supporting policies including European Partnership for a climate neutral, sustainable and productive Blue Economy starting in 2022 (programme co-fund action)
- Deploying and adding value to Environmental Observations
- Digital and data technologies as key enablers
- Strengthening agricultural knowledge and innovation systems

RIA	IA	CSA	Other (partn)	Total
16	4	22	1	43

Budget (mIn EUR)



Highlights 2022

- HORIZON-CL6-2022-GOVERNANCE-01-03: Multi-layer governance performance of marine policies (RIA)
- HORIZON-CL6-2022-GOVERNANCE-01-06: Water governance, economic and financial sustainability of water systems (RIA)
- HORIZON-CL6-2022-GOVERNANCE-01-07: New technologies for acquiring in-situ observation datasets to address climate change effects (IA)
- HORIZON-CL6-2022-GOVERNANCE-01-09: Environmental observations solutions contributing to meeting “One Health” challenges (RIA)
- HORIZON-CL6-2022-GOVERNANCE-01-10: Piloting approaches and tools to empower citizens to exercise their “data rights” in the area of food and nutrition (RIA)
- HORIZON-CL6-2022-GOVERNANCE-01-11: Upscaling (real-time) sensor data for EU-wide monitoring of production and agri-environmental conditions (RIA)



EU Missions

R&I Missions

Relating EU's research and innovation better to society and citizens' needs; with strong visibility and impact

A mission is a portfolio of actions across disciplines intended to achieve a **bold and inspirational and measurable goal** within a set timeframe, with **impact** for society and policy making as well as relevance for a significant part of the European population and wide range of European citizens.

Horizon Europe defines mission characteristics and elements of governance, and **5 missions areas**. Specific missions will be programmed within the Global Challenges and European Industrial Competitiveness pillar, but may also benefit from actions carried out within other parts of the Programme as well as complementary actions carried out under other Union programmes.

Five Missions Areas



**Adaptation to
climate change,
including societal
transformation**



Cancer



**Healthy oceans,
seas, coastal &
inland waters**



**Climate-neutral
& smart cities**



**Soil health &
food**



Mission Adaptation on Climate Change

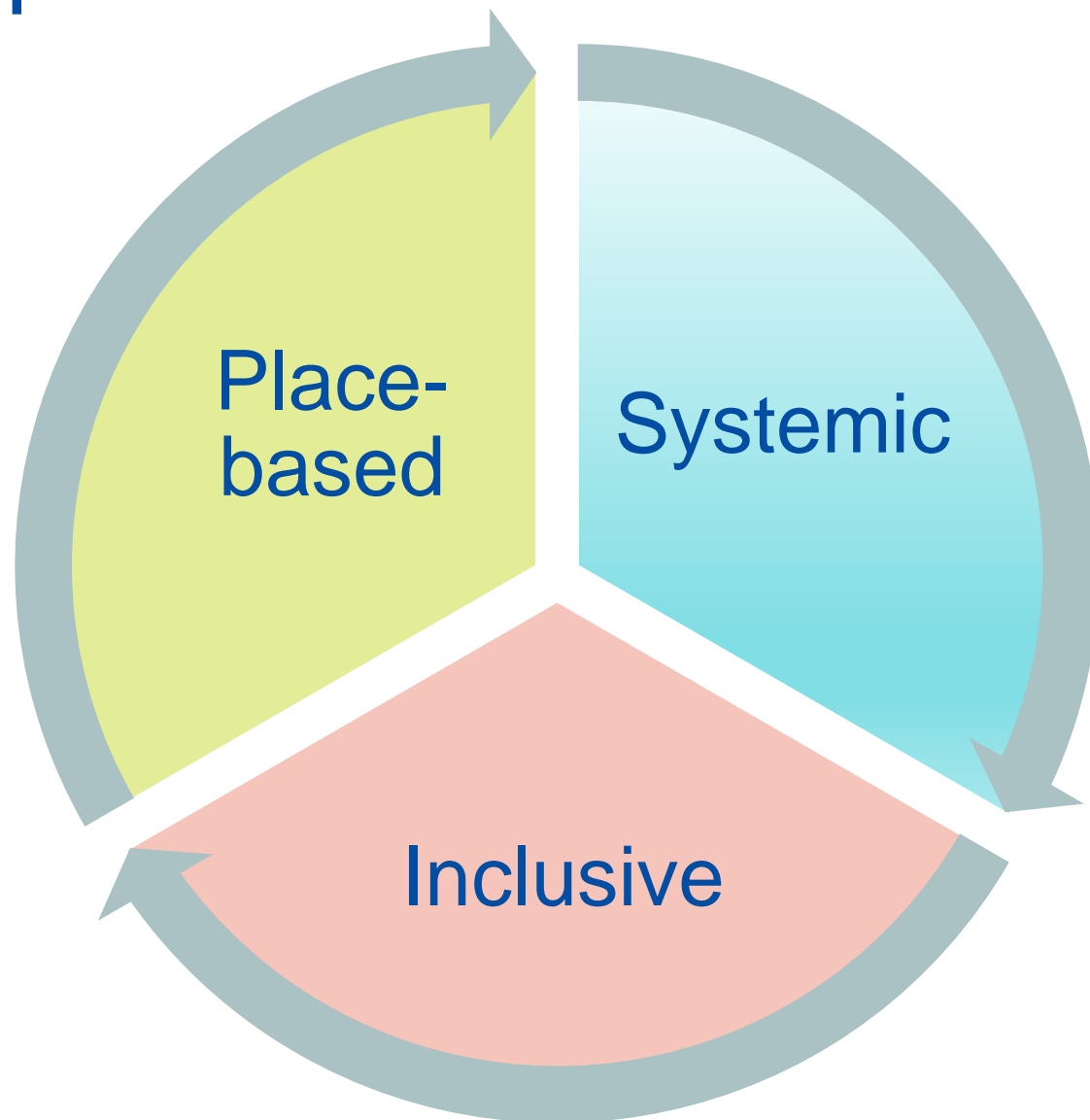
October 2021

Policy Framing

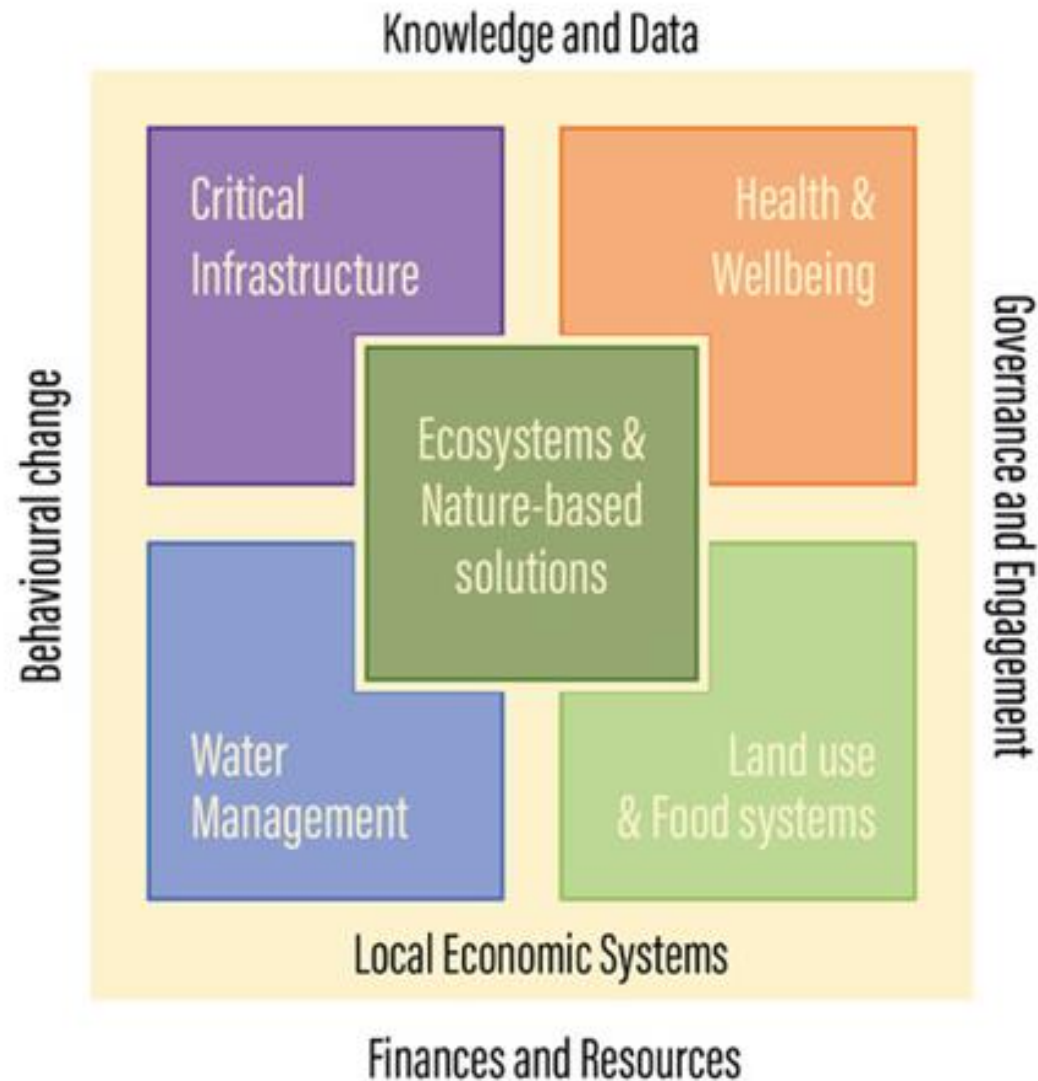
Green Deal in general and new EU Strategy on Adaptation to Climate Change

- Strategy's overarching vision: in 2050, the EU will be a climate-resilient society, fully adapted to unavoidable impacts of climate change
- Strategy's central dimensions:
 - Smarter adaptation: improving knowledge and managing uncertainties
 - More systemic adaptation: supporting policy development at all levels and services
 - Faster adaptation: speeding up adaptation across the board
 - Stepping up international actions for climate resilience

Approach



10 areas of innovation and transformation



Transforming together



Phases

**build-up
(2021-2023)**

**full deployment
(2024-2027)**

**consolidation
(2028-2030)**

Horizon Europe Work Programme 2021-2022 - amendement

Actions proposed to prepare the ground for the mission

2021: opening 11 January, deadline 12 April, 2022

2022: opening 7 June, deadline 27 September, 2022

Proposed partnerships



Rescuing biodiversity to safeguard life on Earth



Accelerating farming systems transition: agroecology living labs and research infrastructures



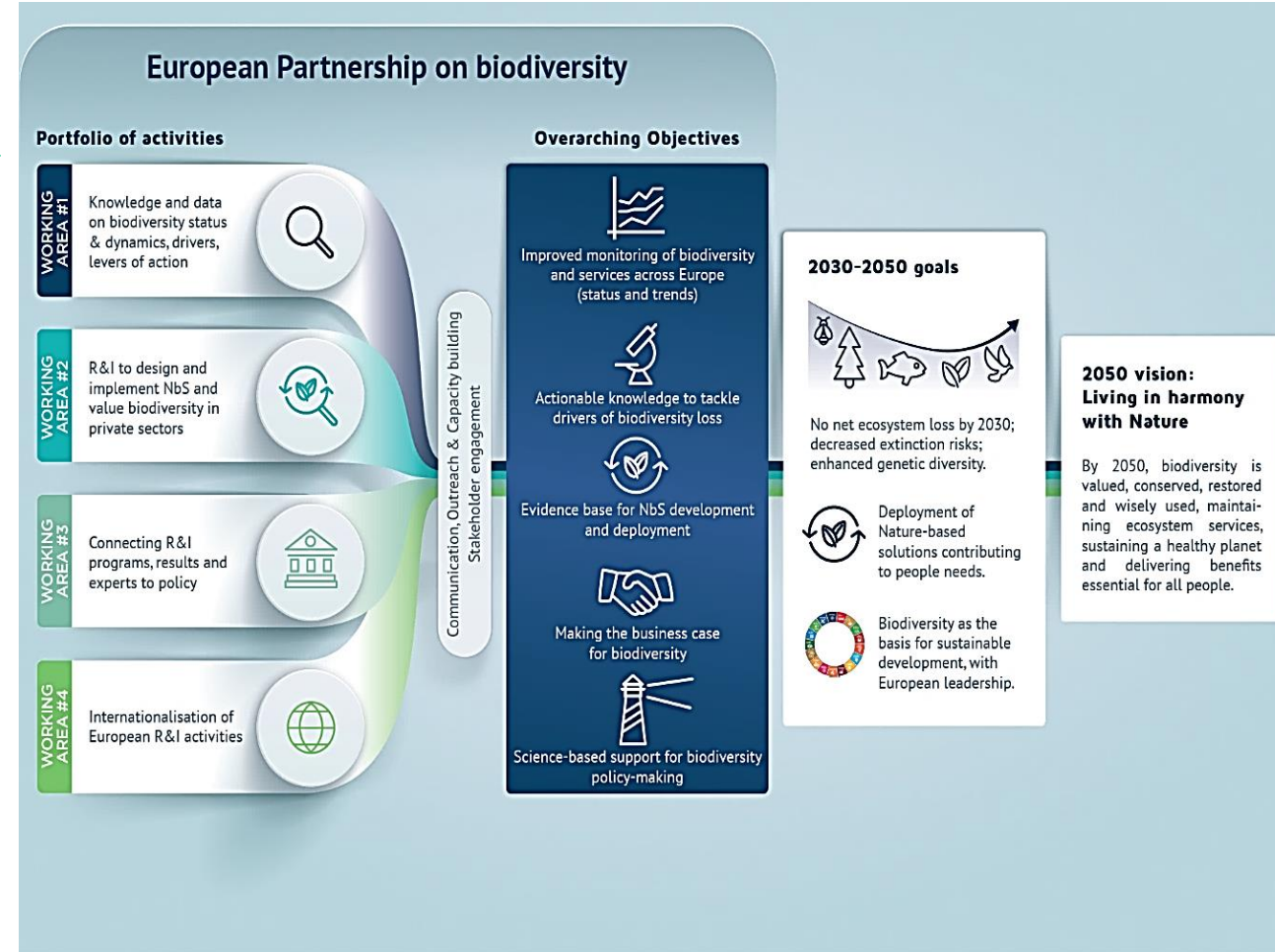
Water4All: Water security for the planet



A climate neutral, sustainable and productive Blue Economy



Agriculture of Data





Thank you!

Contacts:

Email: tiago.freitas@ec.europa.eu

Linkedin: <https://be.linkedin.com/in/tiago-freitas-96467b10b>

More on NBS:

[The EU and NBS](#) (EC website)

[NBS valorisation](#) reports

[Public Procurement of NBS](#) (report)

[Evaluating the impact of NBS](#) (handbook)

More info on Horizon Europe:

[Cluster 6 WP \(2021-2022\)](#)

[Press Release launching the main work programme \(2021-2022\) of Horizon Europe](#)

[Horizon Europe](#)

[Horizon Europe's Strategic Plan](#)

[Funding & Tenders portal](#)