5ᵗʰ Zero Pollution Stakeholder Platform meeting

9 November 2023

Agenda

10:30	Registration and welcome coffee
11:00	Welcome and introduction (Co-chairs)
11:10	**European Year of Skills for the Green Deal Transition**
12:30	Networking lunch
14:00	**New European Bauhaus (NEB): Imagining and building a future that is 'Beautiful, Sustainable and Together'**
14:45	**Towards a strategic research agenda for the Green Deal transition including Zero Pollution**
16:00	**Information Points – (a) Upcoming Upcoming meetings in 2024 (b) Second edition of the ZP Outlook and Monitoring report (2024)**
16:20	Conclusions and next steps by the co-chairs
16:30	End of meeting

Welcome and introduction

Co-chairs

Patrick Child, Deputy Director General, DG Environment, European Commission and

Marieke Schouten, Member of the Committee of the Regions

European Year of Skills for the Green Deal Transition

Skills for Zero Pollution Ambition

1. Local and Regional authorities need both financial and technical support for implementing the Zero Pollution Action Plan.

2. Need for support mechanisms, capacity building for local and regional authorities, knowledge sharing and innovation.

3. Inclusion of young people, also through Erasmus+, European Solidarity Corps and the European Social Fund programmes.

4. Connection with Circular Economy, for example in the textiles sector.

5. Special attention to the Chemicals strategy

Markku Markkula 9.11.2023

European Committee of the Regions

Ensuring skills for Chemicals Strategy

1. Importance of human capital in implementation.

2. Ensure continuity of staff.

3. Provide the time for workers to be properly trained in chemical management.

4. Upskilling and reskilling of workers is key to ensuring competitiveness.

5. EU financial support for the upskilling and reskilling of workers.

6. Create new economic opportunities while fostering social justice and resilience, especially in the most vulnerable regions.

7. Need of very complex knowledge, specialist expertise and investment of time on the part of companies and authorities, and constant need for information, advice and further training.

EU Chemicals Strategy
for Sustainability

#ChemicalsStrategy
#EUGreenDeal

European Commission

Markku Markkula 7.11.2023

European Committee
of the Regions

New skills are needed for the green and digital transition to deliver on the Green Deal and Zero Pollution. Why and how?

CoR Resolution European Year of Skills & CoR Resolution Harnessing talent
in Europe's Regions made among others the following statements and proposals:

1. Digital and green transitions require a fundamental shift of skills.
2. Investments in future-proofing skills requires a paradigm shift in all skills sets.
3. Develop new ideas, services and models to better address societal challenges.
4. Strengthen innovation capacity and facilitate the transfer and upscaling of innovation solutions.
5. Stimulate dynamic innovation ecosystems through smart specialisation strategies.
6. Create talent-attraction ecosystems that are tailor-made, interoperable and place-based.

7. Education, training and VET should be continuously updated and framed by a future-oriented skills perspective.
8. Create skills ecosystems and increase agility of VET.
9. Importance of Centres of Vocational Excellence (CoVEs).
10. Investments into capacity building of persons employed in the public sector is a must.
11. Recognize the competences learned through non-formal education and informal learning.
12. Pay due attention to citizenship skills with the view to empowering people of all ages.
13. Inclusion of gender equality dimension.
14. "One-size-fits-all approach is not effective.

15. Develop evidence-based policy-making and undertake strategic foresight activities.
16. LRAs should collaborate closely with educational establishments and industry.
17. Build on the potential of mentoring schemes and incorporate the principles of multilevel governance cooperation.
18. Promote the modernisation and adaptation to climate change of farms.
19. Recognise the potential of smart villages in rural areas.
20. EU cohesion policy can have a greater impact on skills.

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4

European Committee of the Regions

What skills and competences are needed to transferring the EU level ambitious policy to locally tailored actions?

I review this in the light of the EU Commission assessment, which on 19 July 2023 brought up, among others, the following statements:

A. EU Missions require the development of **large-scale and cross-policy synergies** over long periods and across the EU, national, regional and local levels in order to succeed.

B. **A broader portfolio of instruments** needs to be mobilised, with the Horizon Europe calls serving only as seed funding and orchestrators rather than the main instruments of deployment.

C. **Member States' programming of EU funding** needs to be aligned more closely with the EU Missions. This is an integral element of synergy building, for instance by **making more systematic use of Cohesion policy for the EU Missions.**

Zero pollution activities are directly linked to many other EU initiatives, particularly to the EU Missions and the New European Innovation Agenda.
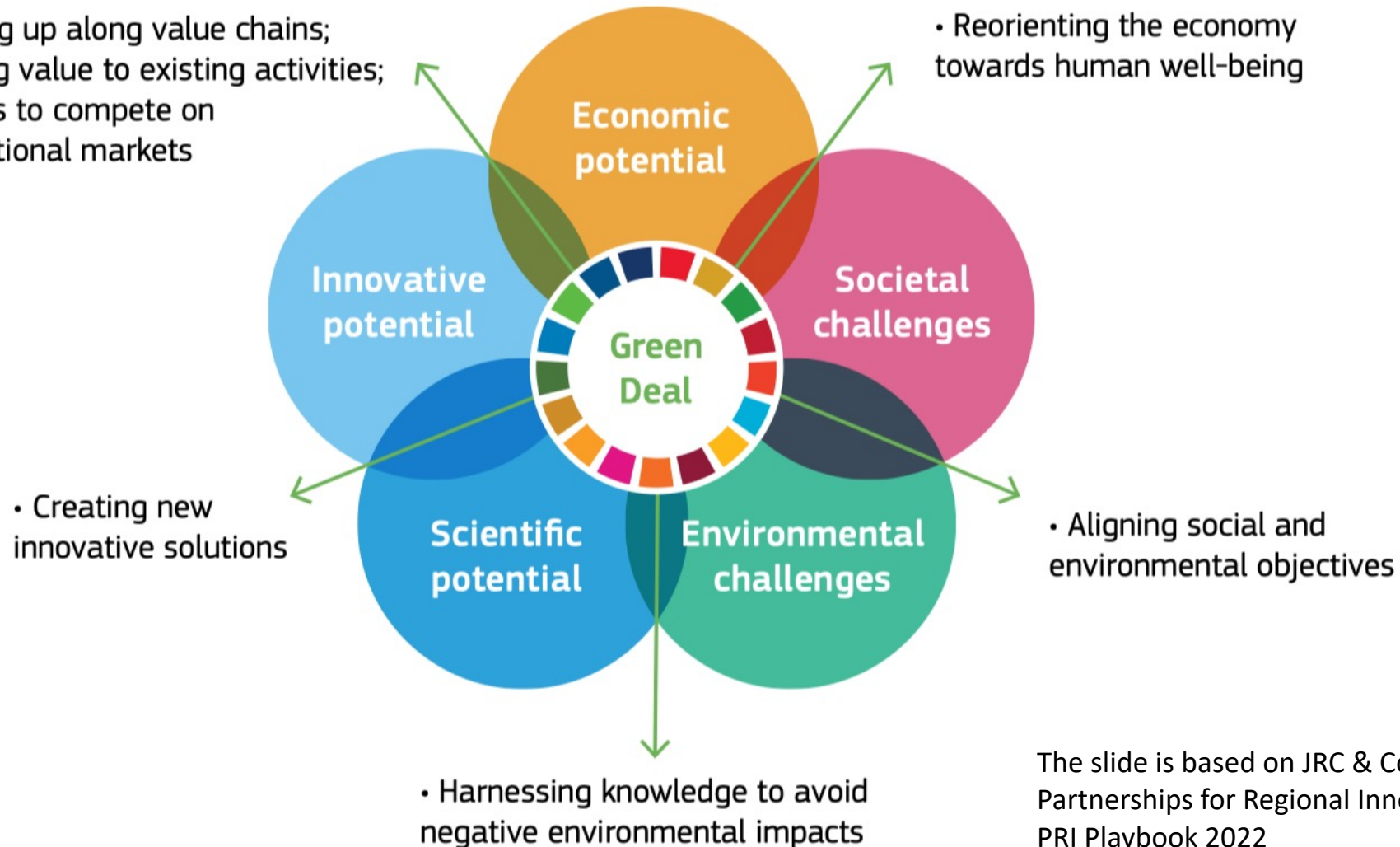
➔ **Reaching the ambitious targets requires competences on all levels to lead and manage the systemic transformation. MLG does not mean only EU, national, regional and local. MLG also means a firm commitment on all levels inside every organization.**

Markku Markkula 9.11.2023

SDGs guide the EU moving to action.
Zero pollution is not a separate activity area.

Systemic transformation requires integrated ambitious actions. These need to be seen and implemented on a broad policy basis:

1. Europe needs **innovation-driven territorial transformation** based on Smart Specialisation and European partnerships.

2. The challenges are complex, and **only part of the necessary scientific and technological knowledge exists**.

3. Implementing the European Green Deal can only happen at the local and regional levels. This requires a true commitment to targeted transformation based on multilevel governance: **empowering all actors**, developing **place-based ecosystems** and using public-private collaboration opportunities.

4. Europe needs more use of multiple funding instruments and **exploit synergies** to generate co-benefits for the economy, society and environment.

5. **Co-create challenge-oriented innovation**: define local missions to deliver effective solutions to pressing societal challenges within defined timeframes.

European Green Deal

Economy that works for people

Europe fit for the digital age

European way of life

Stronger Europe in the world

European Democracy

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European Committee of the Regions

Conclusions

Our targets are ambitious. Special focused actions are needed. Mindset change needs to be accelerated. Zero pollution is directly linked to many other EU initiatives, particularly to the EU Missions and the New European Innovation Agenda. Carrying out systematic transformation processes requires:

On all levels
1. New evidence-based mentality, methodologies and competences to accelerate the implementation and to make it happen bottom-up.
2. Deep understanding of interrelationships in tackling complex grand societal challenges – and systemic change management based on all four dimensions of sustainability: ecological, economic, social and cultural.
3. Focus and invest much more on learning to learn skills and competences to increase human capital based on professional development of personal and team learning.

On local level
4. Environmental aspects need to be included in all education: general lifelong learning opportunities for all and specific programmes in primary and secondary schools, VET, and all university education.
5. Cities and regions should include skills development action plans in their strategies, climate neutrality roadmaps and operational budgets. The special focus should be on changing the mindset to see the city as a platform and community of all actors, including citizens and industry – and breaking the silo way of operating
6. EU needs bottom-up breakthrough initiatives to be carried out in European partnerships to showcase and conceptualize the transformation processes for a European-wide use.

Markku Markkula 9.11.2023

The Sustainability Transition

If you can't measure it, you can't manage it, and you can't improve it!

Athens University of Economics and Business (AUEB) and Technical University of Denmark (DTU)
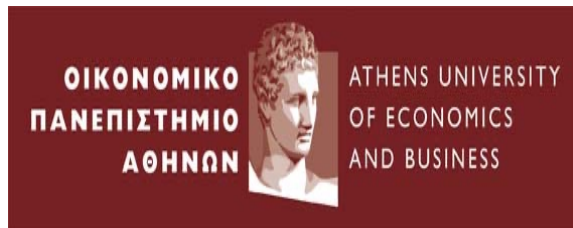
Director ATHENA Information Technologies RC

Chair UN SDSN Global Climate Hub and European Hub, Chair AE4RIA

Member World Academy of Art & Science, European Academy of Science, European Academy of Science Technology

President European Association of Environmental and Resource Economists

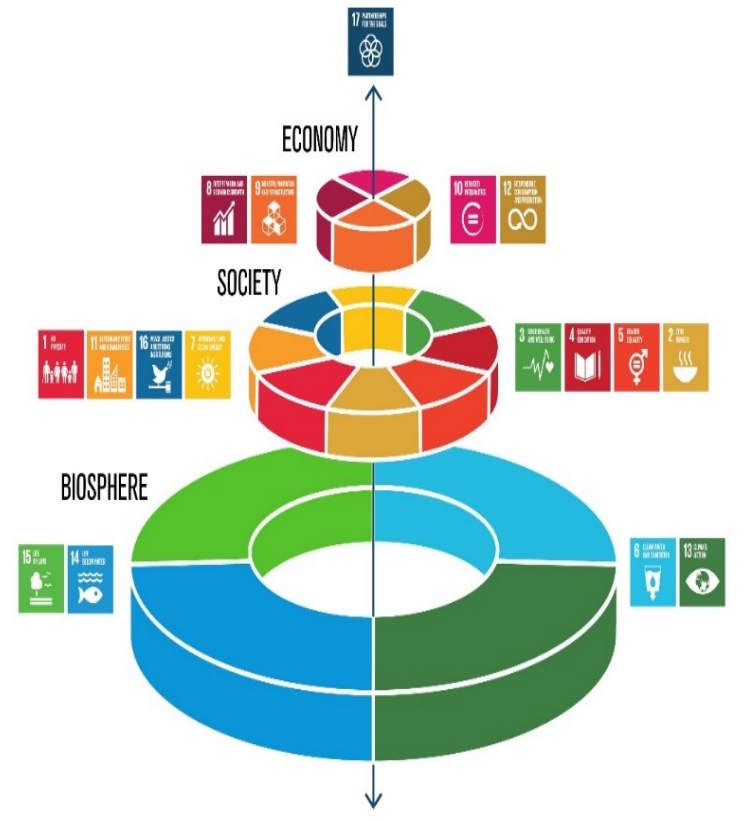*President World Council of Environmental and Resource Economists*

AE4RIA
Alliance of Excellence for Research and Innovation on Aephoria

200 PEOPLE

100 PROJECTS

150 CONFERENCES ORGANIZED

543 PUBLICATIONS

500M FUNDING

Prof. Phoebe Koundouri is the Founder and Scientific Chair of AE4RIA

Research and Innovation Centers

ReSEES — Research laboratory on Socio-Economic and Environmental Sustainability — ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS
ReSEES Laboratory

Stochastic Modeling and Applications Laboratory — ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS
Stochastic Modeling and Applications Laboratory
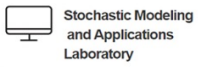
ATHENA — Research & Innovation Information Technologies — Sustainable Development Unit
Sustainable Development Unit / Athena

DTU Management — Department of Technology, Management and Economics
DTU Management Department of Technology, Management and Economics Climate and Energy Policy Division

Innovation Acceleration Hubs

BRIGAID CONNECT
Brigaid Connect

MENA MARITIME Accelerator
MENA Maritime Accelerator

The Black Sea Accelerator — DOORS — BRIDGE-BS
Black Sea Accelerator

SDSN Global Climate Hub
SDSN Global Climate Hub

eit Climate-KIC — Climate-KIC is supported by the EIT, a body of the European Union
Climate-KIC Greece Hub

Science - Policy Networks

SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK — A GLOBAL INITIATIVE FOR THE UNITED NATIONS
SDSN

SDSN Europe
SDSN Europe

SDSN Greece
SDSN Greece

Water Europe — Technology & Innovation
Water Europe

Nexus Cluster
Nexus cluster

Scientific Associations and Academies

EAERE — European Association of Environmental and Resource Economists
EAERE

wcere — World Congress of Environmental and Resource Economists
WCEREA

Academia Europaea
Academia Europaea

World Academy of Art and Science
WAAS

iap — SCIENCE HEALTH POLICY — the interacademy partnership
IAP

European Academy of Sciences and Arts
European Academy of Sciences and Arts

SDGs – ESG measurement
Sustainable Finance

Sustainable Pathways Climate Neutrality & Resilience

Sustainable Pathways for Seas and Oceans

Sustainable Pathways Land Use & WFEB Nexus

Innovation Acceleration Education Upskilling/Reskilling

Summary of the Policy Framework for the transition to sustainability

2015 | **2018** | **2019** | **2020** | **2021** | **2022** | **2023**

HUAWEI

White Paper:
Green Digital Skills
to boost the twin transition

AE4RIA
Alliance of Excellence for
Research and Innovation on Aephoria

pwc

2023 European Year of Skills

Our overall approach

Digital	Green
Data Source: DigiComp, ESCO	Data Source: O*NET, ESCO

1. data-driven methodology
to identify digital/green skills and to gauge the ways in which
the demand for these competences responds to environmental regulation

2. Classify and match green and digital aspects in the identified employment skills by sector

Map the Digital Skills of the future	Map the Green Skills of the future

Analysis By Sector – Prioritizing on:

Power sector | ICT sector | Climate and Energy sectors

White Paper: Green Digital Skills to boost the twin transition

Skills taxonomies

categorize occupations into job families and plan the next day for the twin transition

Skill taxonomies

Characteristics

European Classification of Skills, Competences, Qualifications and Occupations (ESCO) identifies and categorises skills/ competences, qualifications and occupations, showing the relationships between occupations, skills/competences and qualifications.

EU focused – It includes 2942 occupations across all hierarchy levels and 13485 skills/competencies and the classification is relevant for the EU labour market and education and training, in 25 European languages.

Correlation between skills and occupations – Occupations are matched with essential and optional skills, competences and knowledge that are related to the job role

The **Occupational Information Network** free online skills database that contains hundreds of job definitions and skills lists to help students, job seekers, businesses and workforce development professionals to understand today's world of work in the United States.

US focused – It includes more than 900 occupations across all hierarchy levels in the public, private, military sectors.

Benchmarking – Skills/ knowledge/ abilities are matched with occupations based on the importance of each in relevance to the responsibilities of each occupation and the level needed to perform the job.

White Paper: Green Digital Skills to boost the twin transition

Green & Digital Occupations – top 6

Green Occupations	Score
energy assessor	90.909
natural resources consultant	78.788
energy conservation officer	75.000
environmental policy officer	75.000
energy analyst	70.833
environmental expert	70.588

Digital Occupations	
webmaster	98.837
software tester	96.154
user interface developer	93.878
ICT network administrator	93.684
database integrator	93.548
system configurator	93.478

Green and Digital Occupations	
smart home engineer	6.818
smart home installer	6.667
geothermal technician	4.878
green ICT consultant	4.762
irrigation technician	4.348
environmental education officer	4.000

Green & Digital Skills – top 6

Green Skills	Score
handling and disposing of waste and hazardous materials	100.000
environmental sciences	90.000
environmental protection technology	86.667
complying with environmental protection laws and standards	84.444
natural environments and wildlife	80.000
advising on environmental issues	65.517

Digital Skills	Score
browsing, searching and filtering digital data	100.000
resolving computer problems	100.000
setting up computer systems	100.000
using word processing, publishing and presentation software	100.000
using computer aided design and drawing tools	100.000
using digital tools for collaboration, content creation and problem solving	100.000

Green and Digital Skills	
environmental protection technology	6.667
complying with environmental protection laws and standards	4.444
operating agricultural or forestry equipment	3.846
using precision measuring equipment	3.333
designing electrical or electronic systems or equipment	2.500
monitoring environmental conditions	2.381

White Paper: Green Digital Skills to boost the twin transition

In collaboration with national governments and respective SDSN National Hubs (2000 institutions globally) we *co-design national and sub-national pathways* for the transition to a **climate neutral and resilient** world.
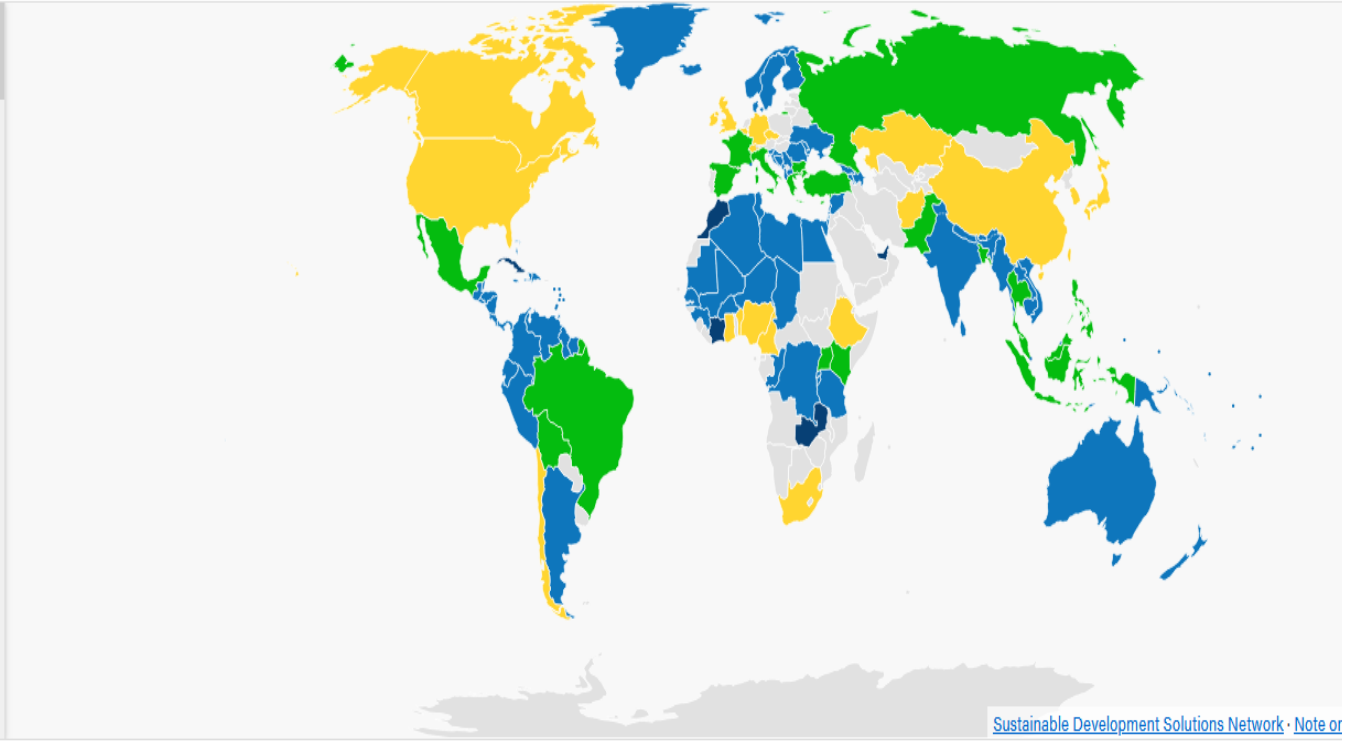
Optimal Dynamic Mixture of

- *Technologies*
- *Policies*
- *Fiscal & Financial Instruments*
- *Socio-Economic Narratives*

2023   2030

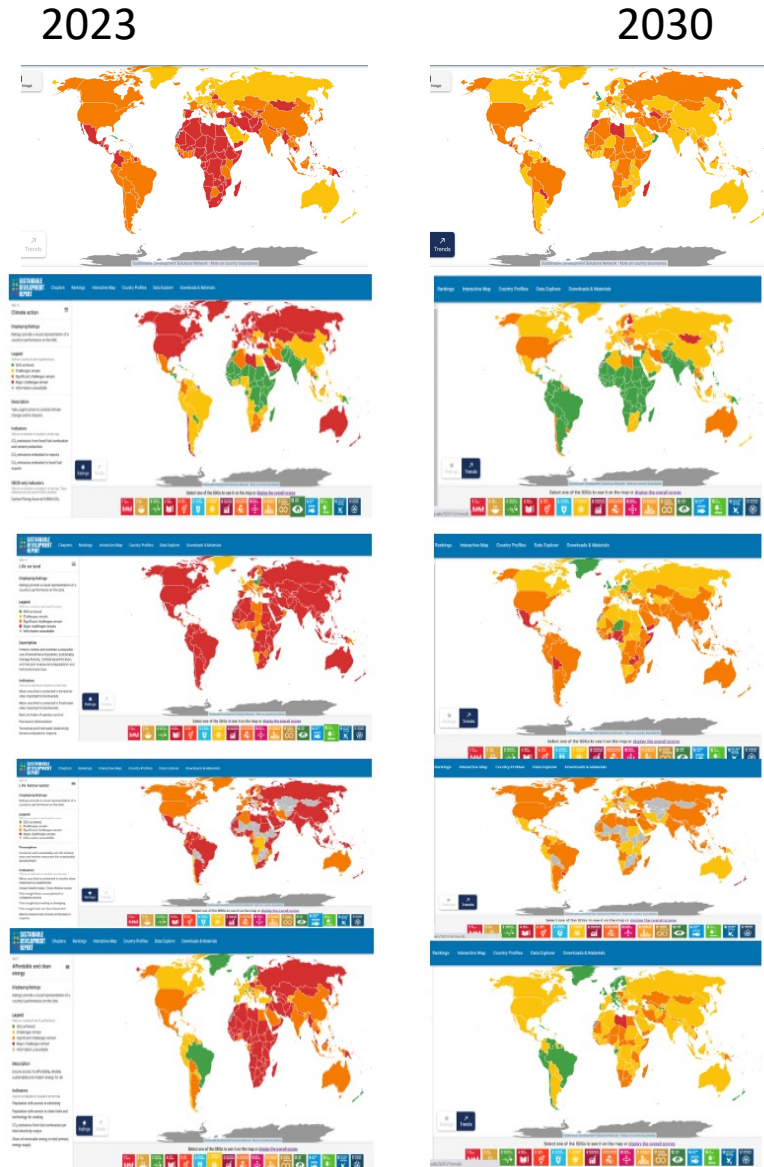Decent Work Sustainable Economic Growth SDG8

Climate Action SDG13

Life on Land SDG15

Life Below Water SDG14

Affordable & Clean Energy SDG7

UN SDSN Global Climate Hub
https://unsdsn.globalclimatehub.org

Climate Data Platforms and Digital Applications

Atmospheric Physics and Climatology

Climate & Energy Modeling

Climate, Land Use, Water-Food-Energy-Biodiversity Nexus Modeling

Climate and Health

Innovation Acceleration for Climate Neutrality and Resilience

Just Transition: Policies, Finance, Labor Market

Transformative Participatory Approaches: National Living Labs and Systems Innovation

Education, Training, Upskilling and Reskilling

Climate Data Platforms and Digital Applications

Mission: Collect, Aggregate, Connect and Visualize Data relative to the objectives of the GCH

Collaborations

Association for Computing Machinery ACM, the world's largest educational and scientific computing society, delivers resources that advance computing as a science and a profession.

TR:NDS Thematic Research Network on Data and Statistics

OpenAIRE

Geospatial Data

GROUP ON EARTH OBSERVATIONS

GEO is a partnership of more than 100 national governments and in excess of 100 Participating Organizations that envisions a future where decisions and actions for the benefit of humankind are informed by coordinated, comprehensive and sustained Earth observations.

GEO Member Map for the year 2022

Number of Members (2022)	
Africa:	31
Americas:	20
Asia/Oceania:	22
C.I.S.:	6
Europe:	35
Total:	114
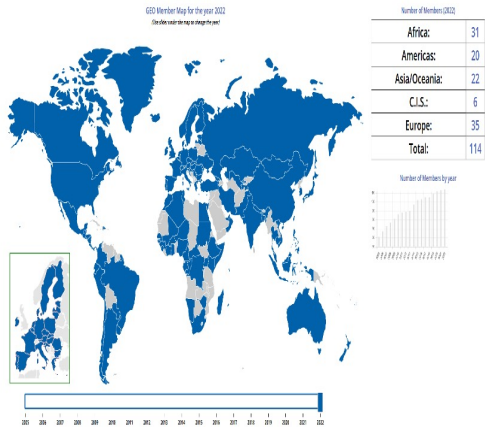
- Biodiversity and Ecosystem Sustainability
- Disaster Resilience
- Energy and Mineral Resource Management
- Food Security and Sustainable Agriculture
- Public Health Surveillance
- Infrastructure and Transport Management
- Sustainable Urban Development
- Water Resources Management

Socio-Economic and General SDGs-related data

OpenAIRE EXPLORE

Science for UN Sustainable Development Goals

Laying the foundation for new approaches and solutions.

SUSTAINABLE DEVELOPMENT GOALS

A collaboration with Athena RC, AURORA European University Alliance, and Swinburne University of Technology, Australia (pending)

SDSN Global Climate Hub Science & Technology Observatory

1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH	4 EDUCATION
235,293	1,278,418	3,050,175	373,226
RESEARCH PRODUCTS	RESEARCH PRODUCTS	RESEARCH PRODUCTS	RESEARCH PRODUCTS
5 GENDER EQUALITY	6 CLEAN WATER	7 CLEAN ENERGY	8 ECONOMIC GROWTH
74,203	401,268	625,742	247,637
RESEARCH PRODUCTS	RESEARCH PRODUCTS	RESEARCH PRODUCTS	RESEARCH PRODUCTS
9 INDUSTRY AND INFRASTRUCTURE	10 NO INEQUALITY	11 SUSTAINABILITY	12 RESPONSIBLE CONSUMPTION
91,537	627,445	431,248	86,947
RESEARCH PRODUCTS	RESEARCH PRODUCTS	RESEARCH PRODUCTS	RESEARCH PRODUCTS
13 CLIMATE ACTION	14 LIFE UNDERWATER	15 LIFE ON LAND	16 PEACE & JUSTICE
1,413,957	283,216	221,191	969,464
RESEARCH PRODUCTS	RESEARCH PRODUCTS	RESEARCH PRODUCTS	RESEARCH PRODUCTS

Supporting Projects

BlueBRIDGE

HORIZON 2020

A Competitive Intelligence Platform for AI-based

Grant agreement ID: 101004870

Duration: Start date 1 January 2021 – End date 31

Budget: Total cost € 4 362 935,75 – EU contribution

13 partners

Coordinated by Fundacion Espanola Para L

CONNECTing in support of Op

Grant agreement ID: 7310

Duration: Start date 1

Budget: Overall € 1 9

10 partners

Coordinated by CON

Building Research environments fostering Innovation, Decision making, Governance and Education to support Blue growth

Grant agreement ID: 675680

Duration: Start date 1 September 2015 End date 28 February 2018

Budget: Overall € 5 295 753,75 EU contribution € 5 295 753,75

13 partners

Coordinated by CONSIGLIO NAZIONALE DELLE RICERCHE, Italy

Funded by: European Commission, RIA – Research and Innovation action, H2020-EINFRA-2015-1

HOW? The power of an operational AI-Driven data infrastructure

1. Combining data from the global research and policy ecosystem > 10K sources

2. A big AI-driven data infrastructure to extract information (meaning)

3. A community to develop indicators and validate data

Atmospheric Physics and Climatology

Head

Team

Mission

Climate model simulations, analyses, and methods combining multiple lines of evidence focused on improving understanding of **human influence on a wider range of climate variables**, including weather and climate extremes – IPCC reports

Study of climate fluctuations in any period
Study of the observations related to the upper layers of the atmosphere
Collation and processing of observations related to air pollution

Supporting projects

What is EIT Climate-KIC
The Role of EIT Greece Hub

Adap
"Strengthening education, research and
India" is an ERASMUS+ CA

GE
Euro
A EUROPEAN

SALAM-N
**Sustainable A
and water Ma
MEditerranea**

European
Commission

Copernicus
Europe's eyes on Earth
Atmosphere Monitoring Service

Collaborations

ΑΚΑΔΗΜΙΑ   ΑΘΗΝΩΝ

| Academy | Research | Publications | Awards | Scholarships | Announcements | Library |

Home » Research » Research Centers » Research Centre for Atmospheric Physics and Climatology

Research Centre for Atmospheric Physics and Climatology

Climate & Energy Systems Modeling

Team
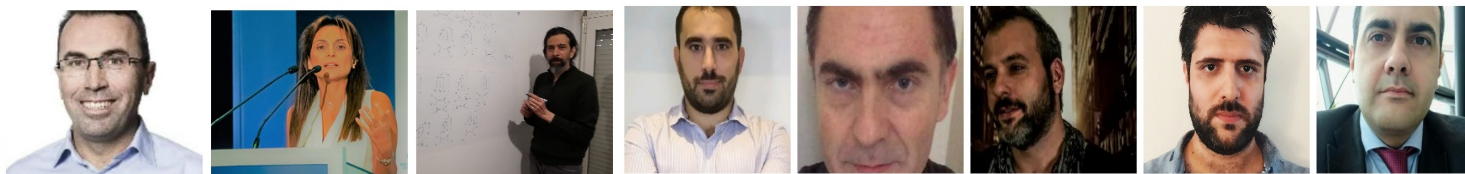
Mission

Climate and Energy Systems modelling will use system dynamics and stochastic modelling techniques to develop decarbonization pathways of the energy system at the national and regional levels.

Energy supply: mapping power generation plants along with their associated fuel, including coal, oil, gas, renewables, bioenergy, nuclear and new zero carbon.

Energy demand by economic sector (transport, households, buildings and industry) recorded along with their associated greenhouse gas (GHG) emissions.

Climate policy, such as carbon pricing, Fit for 55, etc calculate their effect on GHG emissions and temperature

Simulation of the scenarios providing detailed values for all relevant variables, along with the resulting temperature increase.

Model: Balmorel Energy-System model

Collaborations

CLIMATE & ENERGY

Balmorel
Energy system model

Supporting Projects

GREECE-JAPAN SUSTAINA... SYMPOSI...

Island sustain...
Identifying c...

Funding Body: Japan Society

Duration: Start date: 1 Ja...

Budget: Overall € 13,761

Coordinated by the Insti...

2 partners (Research
Athens University of Econom...
Japan)

SEVENTH FRAMEWORK PROGRAMME — European Commission

Modular Multi-use Dee...
Platform Harnessing a...
Mediterranean, Subtro...
and Maritime Resourc...

Grant agreement ID: 288192

Duration: 1 February 2012 – End date31 Janu...

Budget: Overall € 6 726 623,82 – EU contribut...

20 partners

Coordinator: CONSORCIO PARA EL DISENO,
PLATAFORMA OCEANICA DE CANARIAS, Spain.

A pan-Eur...
Renewab...
Energy

Prof. P...
committee me...

Duration:

SEVENTH FRAMEWORK PROGRAMME — European Commission — MER MAID

Innovative Multi-purpose offshore platforms: planning, design and operation

Grant agreement ID: 288710

Duration: Start date1 January 2012 – End date31 December 2015

Budget: Overall€ 7 376 567,60 – EU contribution€ 5 483 411

28 partners

Coordinated by: DANMARKS TEKNISKE UNIVERSITET, Denmark

Integrated energy system modelling in Balmorel
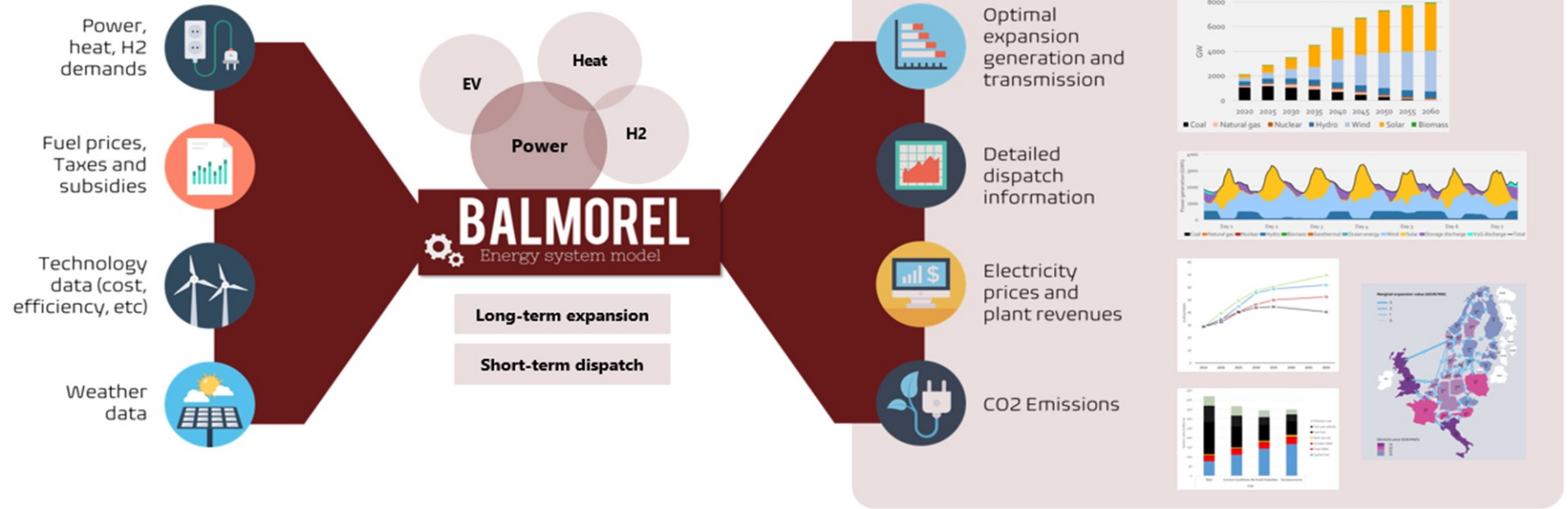
European decarbonization pathways
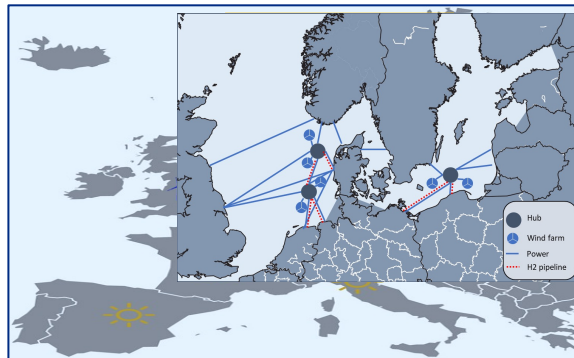
Regional decarbonization pathways
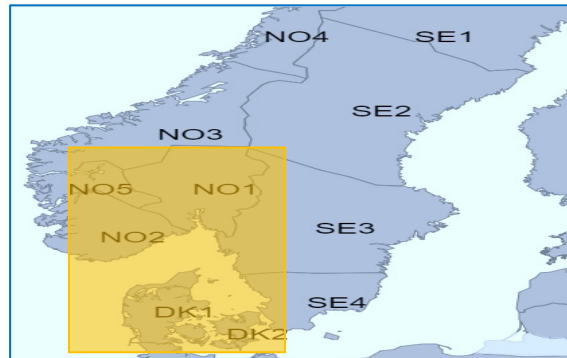
National decarbonization pathways
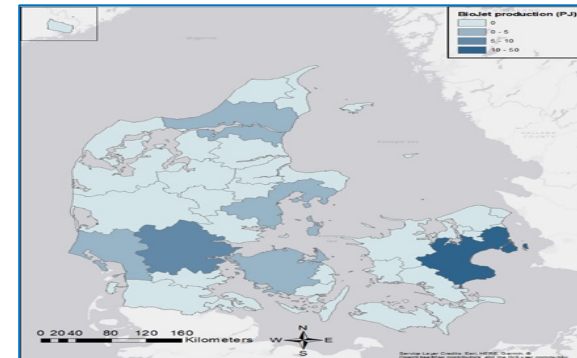
# Model renewable fuels and Power-to-X (renewable to electricity) production European scale

Energy sources and hydrogen infrastructure, spatial distribution at European level by 2050

North European countries

- Large potentials for offshore wind
- District heating
- Cheap onshore wind
- Biomass availability

Central and south European countries

- Cheap solar PV
- Hydrogen industry

Hydrogen infrastructure in the future?

Hydrogen import from other regions?
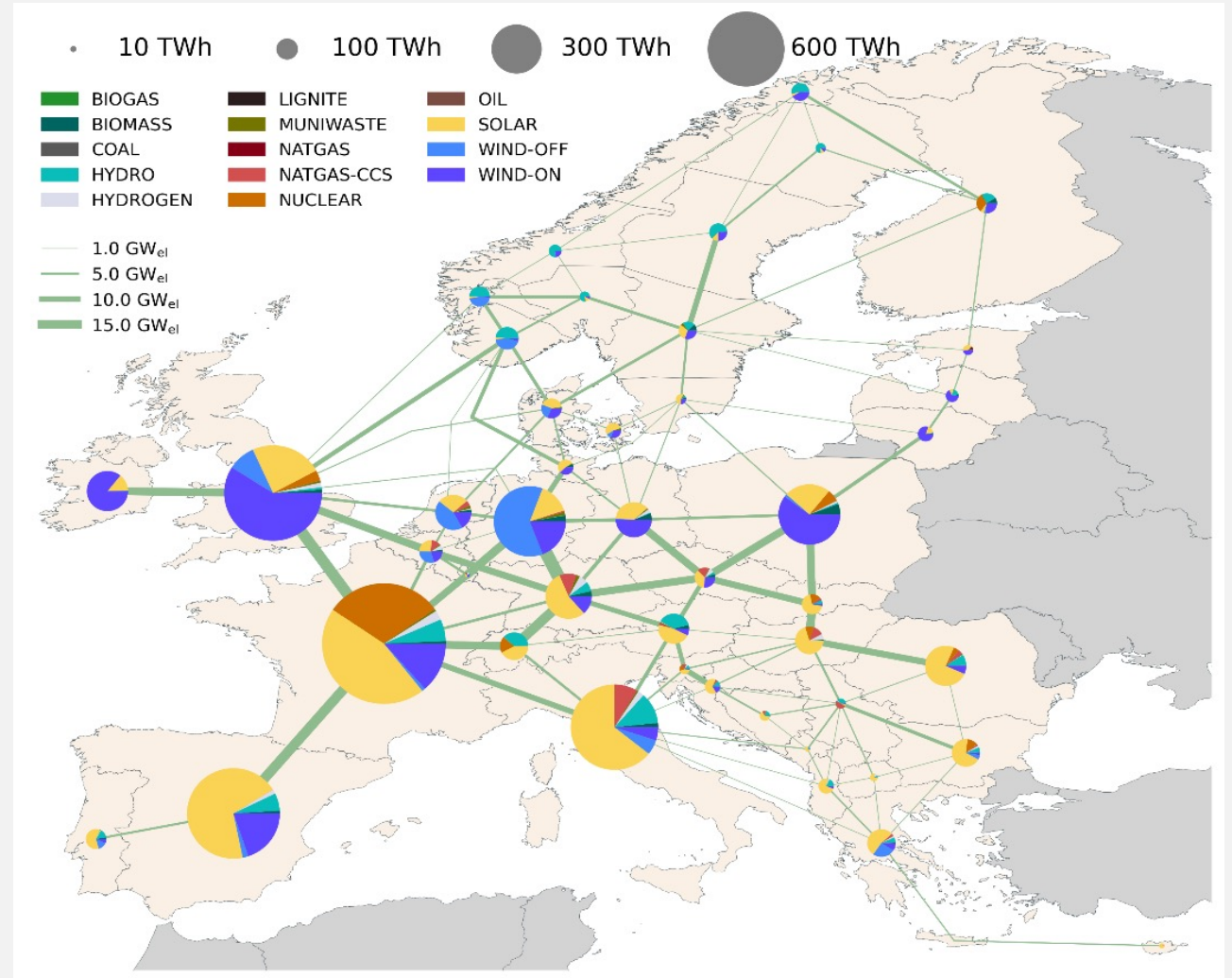
TO BE LAUNCHED AT COP28: EU-27, UK, THE BALKANS

Climate, Land Use, Water-Food-Energy-Biodiversity Nexus Modeling

A network for sustainable food systems at national and global scales
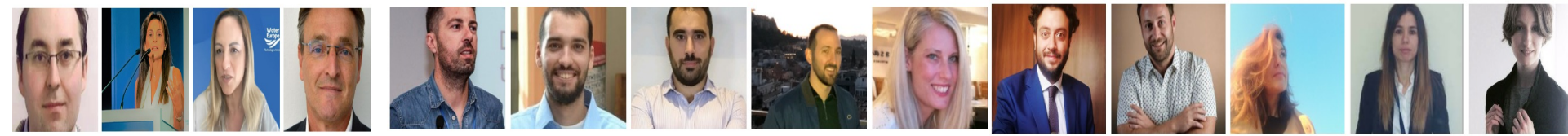
The Food, Agriculture, Biodiversity, Land-Use and Energy (FABLE) Consortium

The **FABLE Calculator** is :

an accounting tool used to study the potential evolution of food and land-use systems over the period 2000-2050.

It focuses on agriculture as the main driver of land-use change and tests the impact of different policies and changes in the drivers of these systems through the combination of a large number of scenarios.

Step 1. Targeted human consumption
Step 9. Feasible human consumption
Step 2. Targeted livestock production
Step 4. Targeted pasture and cropland
Step 5. Productive land adjustment — If the targeted productive land is higher than the maximum land available depending on initial stocks and restrictions on forests and other land conversion
Step 7. Feasible livestock production
Step 6. Feasible pasture and cropland
Step 3. Targeted crop production
Step 8. Feasible crop production
Step 10. Computation of indicators

Legend:
→ Sends input to compute targeted variables
→ Sends input to compute feasible variables
Step to compute targeted variables
Step to compute feasible variables

- Food security
- GHG emissions
- Biodiversity

Supporting Projects

SEAwise: Shaping ecosystem based fisheries management (EBFM)

Duration: 2021 - 2025

Budget: € 8,000,000 (Horizon 2020)

Objective:
To provide a fully operational approach for European Ecosystem Based Fisheries Management based on persistent networks and co-designed innovation.

This will be achieved by:
1. Creating a network of stakeholders, advisory bodies, decision-makers, and scientists to co-design EBFM priorities and methodologies;
2. Collecting data on European fisheries connections with social and ecological systems from scientists and stakeholders;
3. Developing predictive models of fisheries interactions with social and ecological systems to assess, select, and execute EBFM policies across Europe;
4. Providing ready-for-uptake advice for EBFM for Mediterranean, western and northern European waters.

Land Use Sustainable Pathway: In Need of an IPFSS Report!

> 1 billion Combination of Scenarios → Pathways

- **Current Trends**

- **National Commitments**

- **Global Targets**

Shifting diets, increasing crop and livestock productivity, and limiting agricultural land expansion, are the strongest drivers of positive change in global biodiversity.

Implementing these reforms in multiple countries would help put us on track to achieve global biodiversity, food security and climate mitigation goals by 2050.

S.1	GDP projections			
SELECTION	GDP_SCEN	DESCRIPTION	GDP variation	2000-2050
x	SSP1	"*Sustainability*" - Medium high speed of economic growth for most advanced countries and high speed of convergence for other countries.		2.4
	SSP2	"*Middle of the Road*" - Medium speed of economic growth for most advanced countries and medium speed of convergence for other countries.		2.2
	SSP3	"*Fragmentation*" - Low speed of economic growth for most advanced countries and low speed of convergence for other countries.		1.1

S.13	Choose the level of activity of the population		
SELECTION	ActivityScen	DESCRIPTION	Value
x	Low	Refers to sedentary lifestyle that includes only the physical activity of independent living.	
	Middle	Moderately active lifestyle that includes physical activity equivalent to walking about 1.5 to 3 miles per day at 3 to 4 miles per hour, in addition to the activities of independent living.	
	High	Active lifestyle that includes physical activity equivalent to walking more than 3 miles per day at 3 to 4 miles per hour, in addition to the activities of independent living.	

S.10	Alternative scenarios on afforestation target		
SELECTION	AFFOR_scen	DESCRIPTION	Value
	NoAffor	No afforestation/reforestation target	Define the afforestation target by 2050 for both scenarios in the green cells of S.10a: AfforTarget
X	BonnChallenge	Afforestation/reforestation target in line with Bonn Challenge commitment	

S.3	Diet		
SELECTION	DIET_SCEN	DESCRIPTION	Value
	SSP1	"*Sustainability*" - future diets are considered to be more sustainable. First, to reflect better management of domestic waste in developed countries, consumption per capita is in the regions assumed almost constant. Second, animal protein demand is reduced in regions and increases in developing ones to reflect diversification of diets, but keeping the consumption of red meat relatively low. For developing regions, more nutritious diets also materialize through a reduction of consumption in root and tubers.	Countries converge to 3300 kcal/cap/d. If animal conso > 75 g prot./cap/day, reduction to that level. If anim conso < 25 g prot/cap/day, increase to that level. Red meat decreased or capped at 5 g prot./cap/day for all. Root conso decreases in poor countries to 100 kcal/cap/day and is replaced by other products.
	SSP2	"*Middle of the Road*" - These future diets follow the projections from FAO at the horizon 2050.	
	SSP3	"*Fragmentation*" - as economic growth is much lower in developing region, the income effects alone leads to a significantly lower demand per capita in these regions	
	NoChange	same diet as in 2010	
x	EATLancetAverage	EAT-Lancet recommended diet (average values per food group)	
	FatDiet	Diet high in fat, sugar, and meat	
	MyDiet	Describe your scenario here	If you want to design your own diet scenario enter the targeted kcal/cap/day per food group by 2050 in the green cells in S.3.c: DietTarget

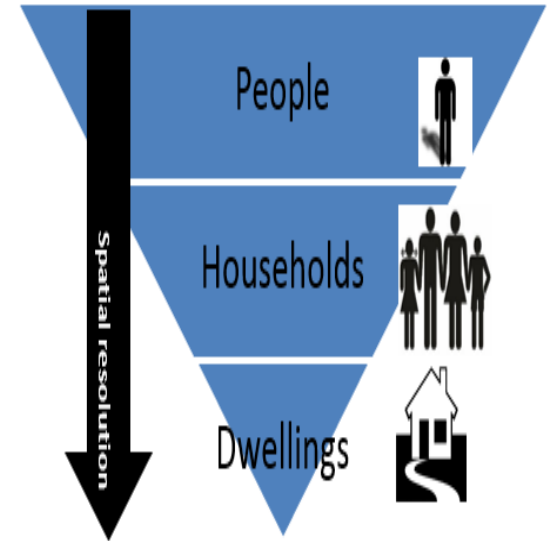# Decline in GHG Emissions by 2050 - GREECE
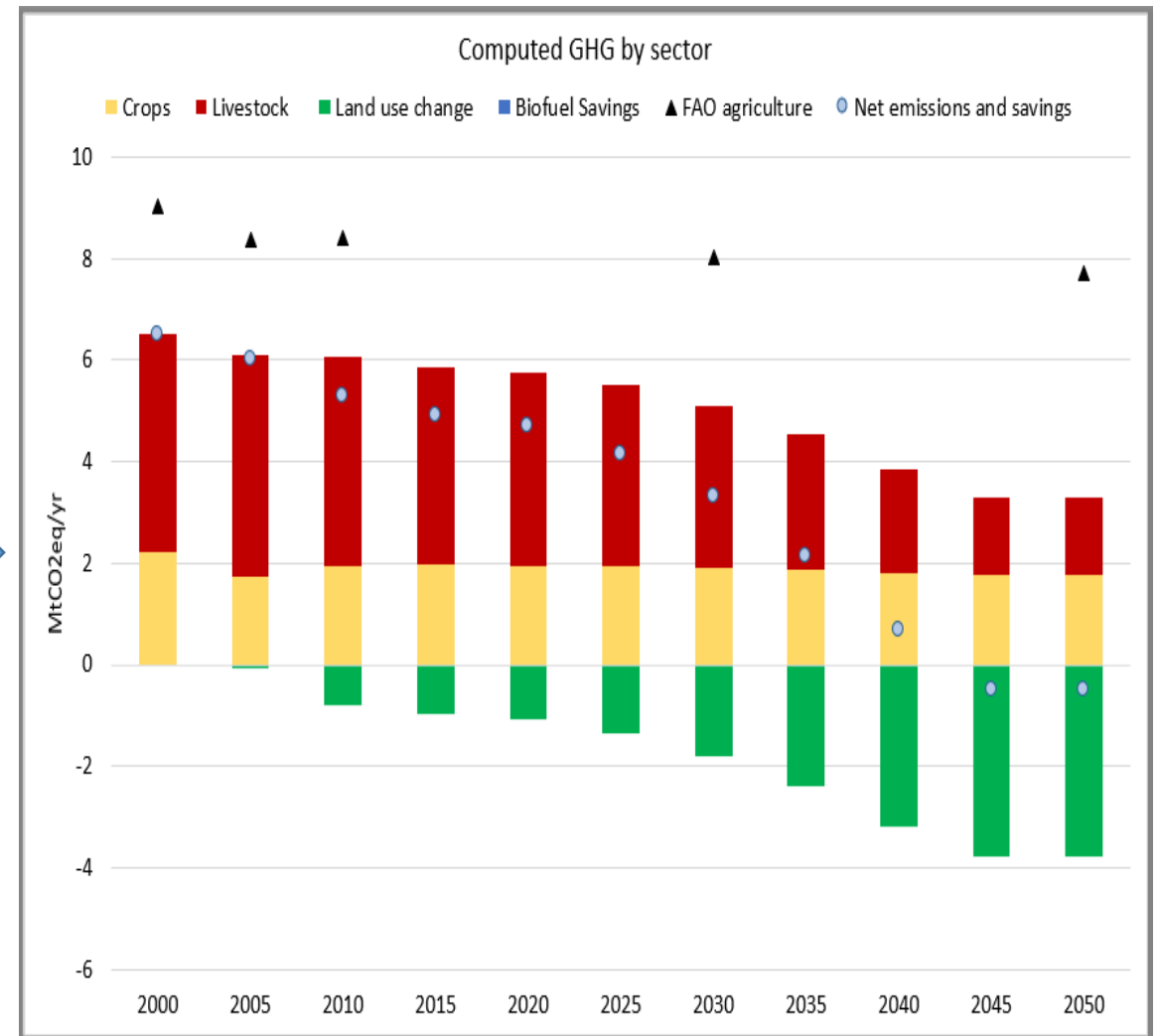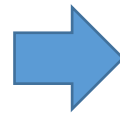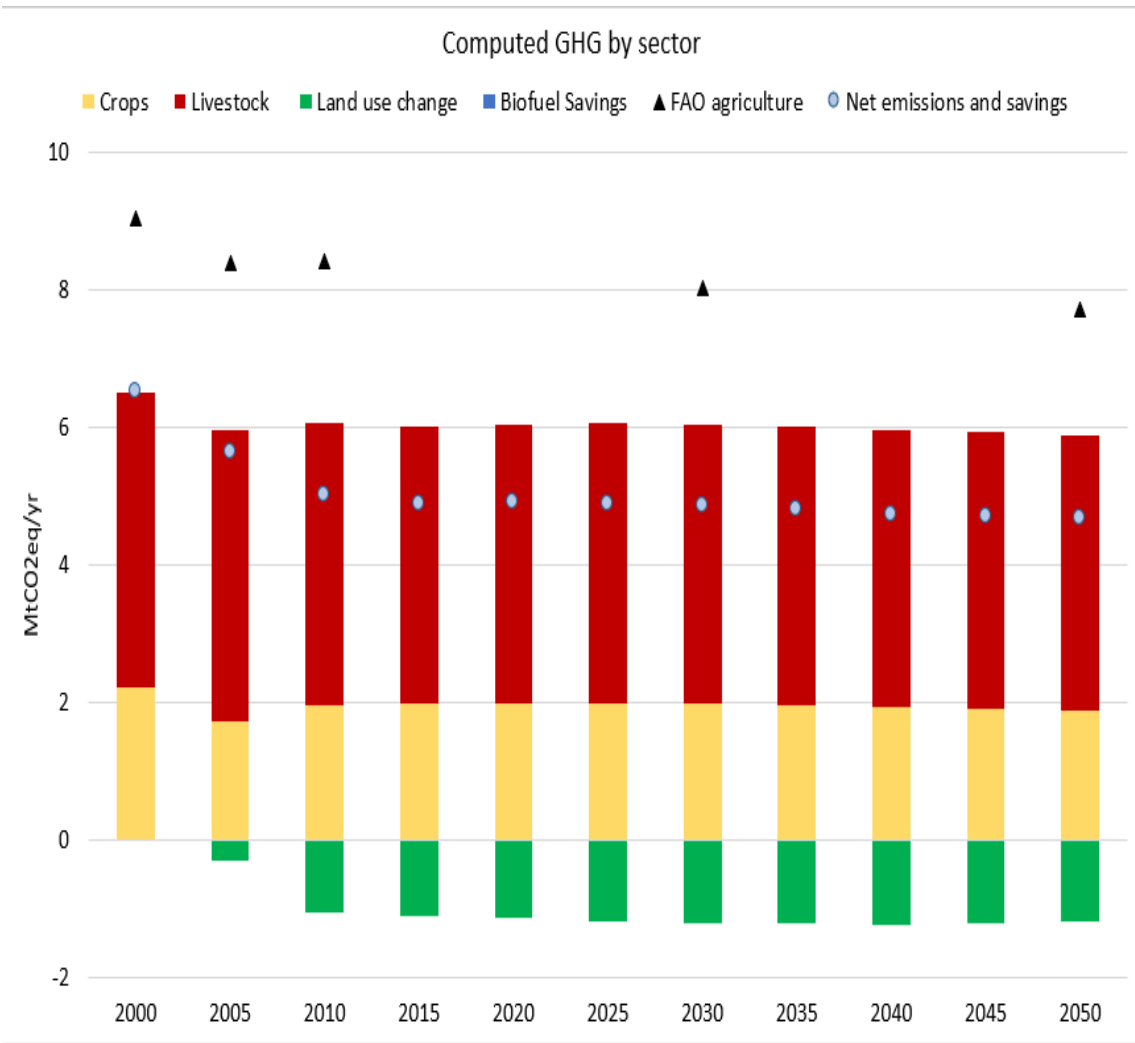
Climate & Health

Mission: Estimate Global economic burden of climate change indicator

Climate change will have a huge impact on population health outcomes wrt morbidity, mortality, and disability for physical and mental conditions.

- Identify climate change risk factors for physical and mental conditions of interest (based on the WHO Environmental Burden of Disease Series)

- Estimate the disease burden resulting from a variety of climate change risk factors by region - Attribute economic cost

People

Households

Dwellings

Spatial resolution

Supporting Projects

SEVENTH FRAMEWORK PROGRAMME

GENESIS G
Scientific b
for the upd

Grant agreement ID

Duration: Start

Budget: Overal

25 partners

Coordinated b

COA
Collabo
Integra

TASK FORCE JO
BASED GREEN
RECOVERY

Co-chairs:
- **Prof. Phoebe Koundo**
  President Elect of
  European Association
  Environmental and
  Resource Economics
- **Dr. Ismail Serageldin,**
  Founding Director
  Bibliotheca Alexandria
  Vice President World
  Bank
- **Dr. Min Zhu,** Deputy
  Managing Director IM

HORIZON 2020

ARSINOE
Building a low-carbon, climate resilient future: Research and innovation in support of the European Green Deal

- Using the **Systems Innovation Approach** (SIA)
- Building on the **Climate Innovation Window** (CIW), the EU reference innovations marketplace for climate adaptation technologies
- Aims **to build an ecosystem** for climate change adaptation solutions.
- Pathways to solutions are co-created and co-designed by stakeholders
- applies a three-tier approach:
  (a) using SIA it integrates multi-faceted technological, digital, business, governance and environmental aspects with social innovation for the development of adaptation pathways to climate change for specific regions;
  (b) it links with CIW to form innovation packages by matching innovators with end-users/regions;
  (c) it fosters the ecosystem sustainability and growth with cross-fertilization and replication across regions and scales

Innovation Acceleration for Climate Neutrality and Resilience

Head

Team

Collaborations
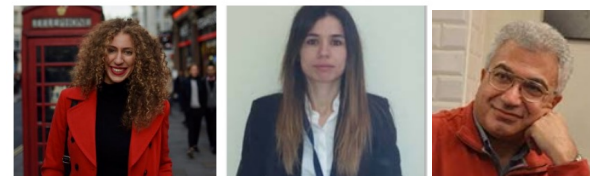
Mission: To meet the EU's 2050 climate neutrality objective, requires **supporting the mass deployment of sustainable innovations – technology, finance, socio-economic, governance**. Incremental innovation, but also disruptive or breakthrough technologies will be needed to accelerate the transition to a green economy and society.

Bring together partners from the business sector, academia, and the public and non-profit sectors to create networks of expertise, through which innovative solutions can be developed, brought to market and scaled-up for impact.

Erasmus + | CATALYST: European VET Excellence Centre for Leading Sustainable Systems and Business Transformation

CATALYST: European VET Excellence Centre for Leading Sustainable Systems and Business Transformation

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The main goal is with the establishment of united CATALYST Centre of Vocational Excellence in 5 countries to give support, create an educational offer to tackle personal and organisational development, and to embrace transformation in SMEs, enabling and inspiring them to re-think and redesign their business models, co-creating and sharing between educational and business organisations.

United Nations Climate Change

Council of Engineers for the Energy Transition (CEET)
An independent advisory council to the United Nations Secretary-General

eit Climate-KIC Hub GREECE

Funded by the European Union

Technological
Innovation
MENA
Maritime
ClimAccelerator

PORTS & SHIPPING

30 start-ups

ClimAccelerator

MARITIME

BLACK SEA ACCELERATOR

FOR A SUSTAINABLE BLUE ECONOMY

Facilitated by BRIDGE-BS and DOORS Projects

BRIDGE-BS

APPLY TO MAKE WAVES!

DOORS
BLACK-SEA

Deadline: 31 October 2023

Technological Innovation

Climate
Innovation
Window
130 start ups

The platform to connect innovators, end-users and investors

https://climateinnovationwindow.eu/

Bootcamps   Workshops
Peer-to-Peer. Mentoring
Funding. Demo Days
Demonstration. Networking

CLIMATE INNOVATION WINDOW

European
Climate Resilience
Innovation Platform

Filters ⌄   ◉ Find your match   Discover

🔍 Search

| Hazards ⌄ | Area ⌄ | Solutions ⌄ | Technology ⌄ | Search |

Hazards
- ☐ Coastal floods (43)
- ☑ Droughts (23)
- ☐ Frost (12)
- ☑ Heatwaves (35)
- ☐ Pluvial floods (5)
- ☐ River floods (13)
- ☐ Sea level rise (22)
- ☐ Storms (17)
- ☐ Wildfires (9)
- ☐ Multi-hazardds (40)

Area
- ☐ Agriculture (2)
- ☐ Biodiversity (23)
- ☐ Buildings (6)
- ☑ Coastal areas (5)
- ☐ Disaster risk reduction (16)
- ☐ Ecosystem-based approaches (2)
- ☐ Energy (22)
- ☐ Financial (17)
- ☑ Forestry (40)
- ☐ Health (10)
- ☐ Marine and fisheries (23)
- ☐ Transport (14)
- ☐ Urban areas (29)
- ☐ Water management (29)

RIVER FLOODS

SimuRes

Urban Areas, Water safety

Aquobex

DROUGHTS

The Honey Olive Grove

Agriculture

Javier Domínguez (Freelance landscaper)

RIVER FLOODS

Water retention through
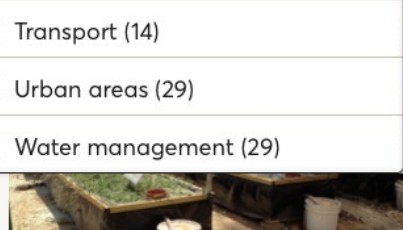
DROUGHTS

Halophyte Zeolite Wetlands

RIVER FLOODS

NOAQ Boxwall
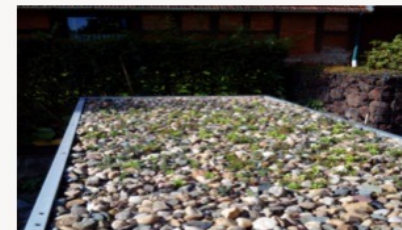
HEAVY PRECIPITATION

Seed blanket for Extensive

Just Transition: Policies, Finance, Labor Market

THE LANCET COVID-19 COMMISSION

Key Sectors for Green Recovery

Energy Sector - shift from fuels-based to minerals-based energy production, storage, and distribution system

Agriculture and Food Sector - directly linked to the environment and the ecosystems

Housing and Urbanization - Urbanization's growth should be managed sustainably

Health Sector - invest COVID-19 recovery packages in strengthening health systems and increase regulation on risk-sources

R&D for Geo-engineering - Removing CO2 from the atmosphere, blocking the sun, etc.

Machine Learning Textual Analysis
Does the EGD support the implementation of the SDGs?
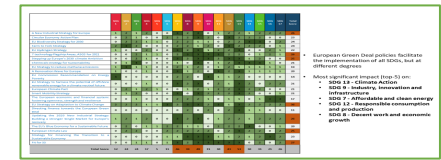
Which of the 6 Sustainable Development Transformations are supported by the EGD?
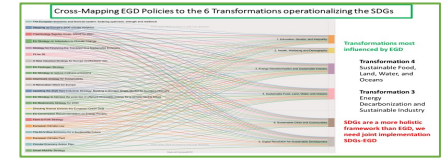
Are the European Recovery and Resilient Plans SDGs-compatible?
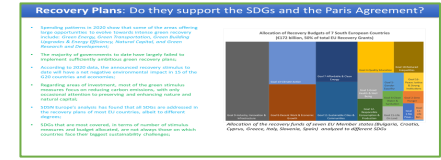
Does the European Semester Process facilitate the implementation of the SDGs?

Sustainable Finance: Valuing Natural and Cultural Capital

Fiscal Innovation: What are the distributional effects of Key EU climate policies?

Sustainable Private Sector

Deep Neural Networks ML Approach:
Cross-Mapping EGD Policies to the 6 Transformations that operationalize the SDGs
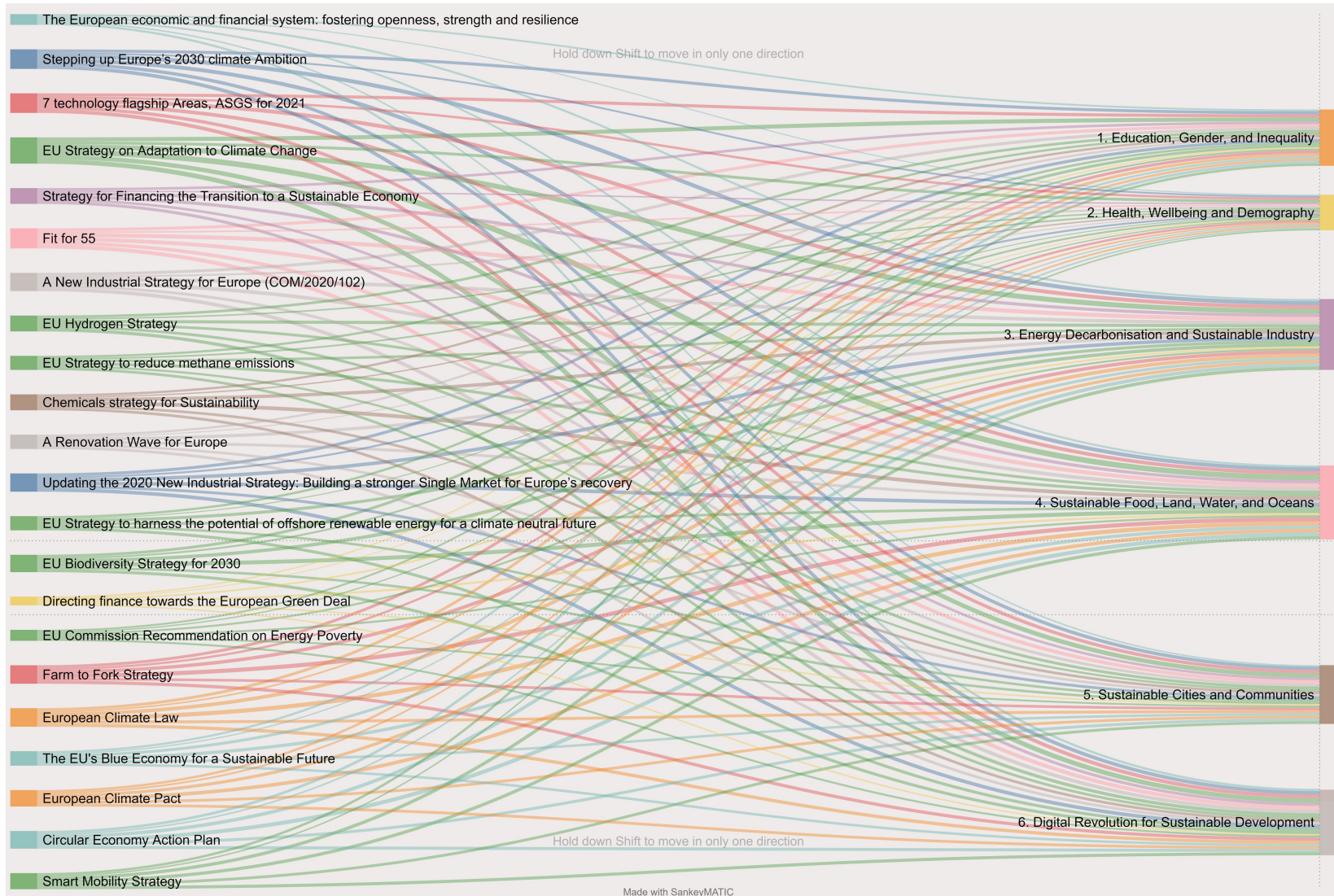
Transformations most influenced by EGD

Transformation 4 Sustainable Food, Land, Water, and Oceans

Transformation 3 Energy Decarbonization and Sustainable Industry

SDGs are a more holistic framework than EGD, we need joint implementation SDGs-EGD

Integrating Natural Capital in the Sustainable Finance Framework

Open-Access, AI-based PLATFORM for Ecosystem and Cultural Services Valuation

Marginal WTP by Ecosystem and Country
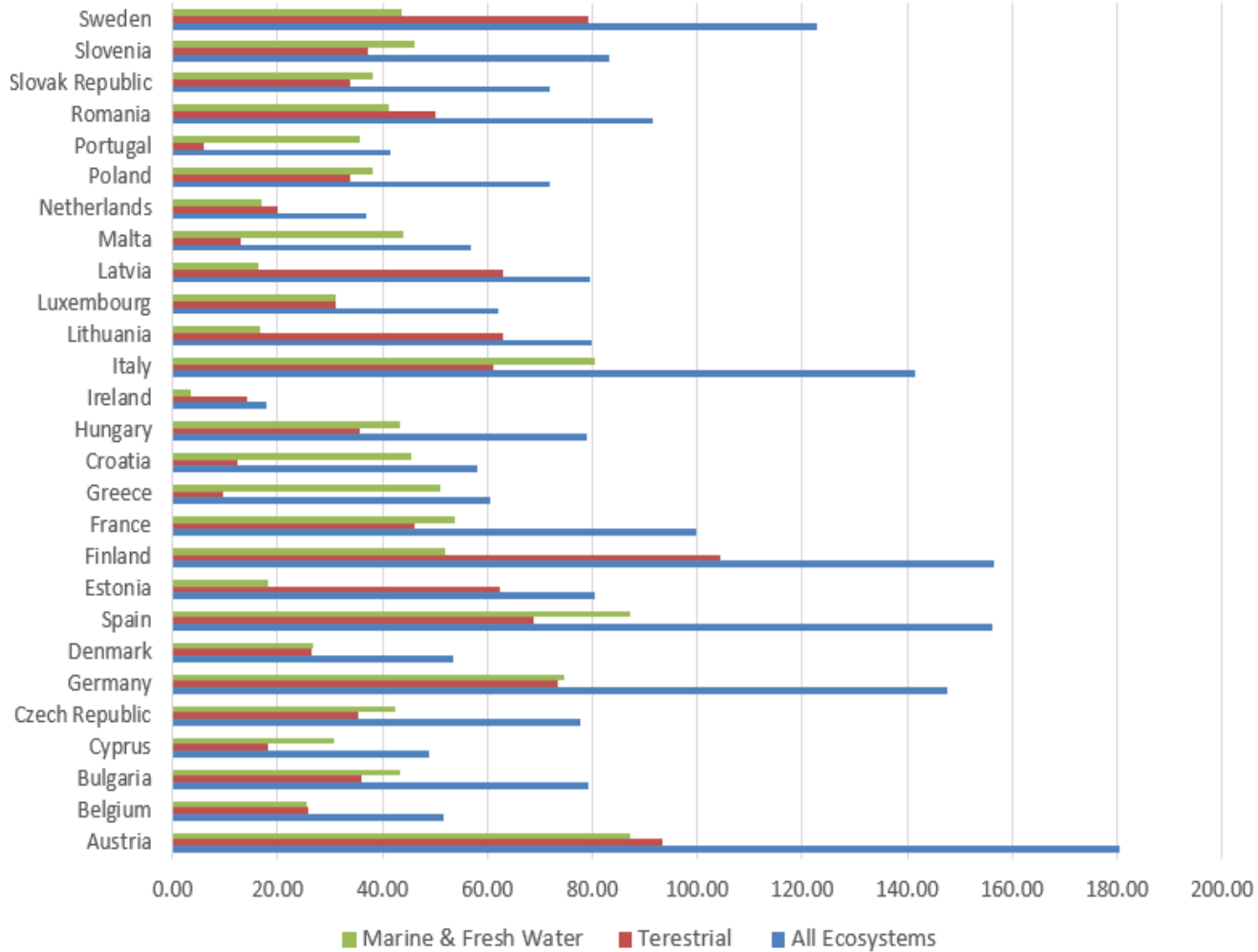
Correlation of Country SDG Index Score and Ecosystem MWTP by SDG
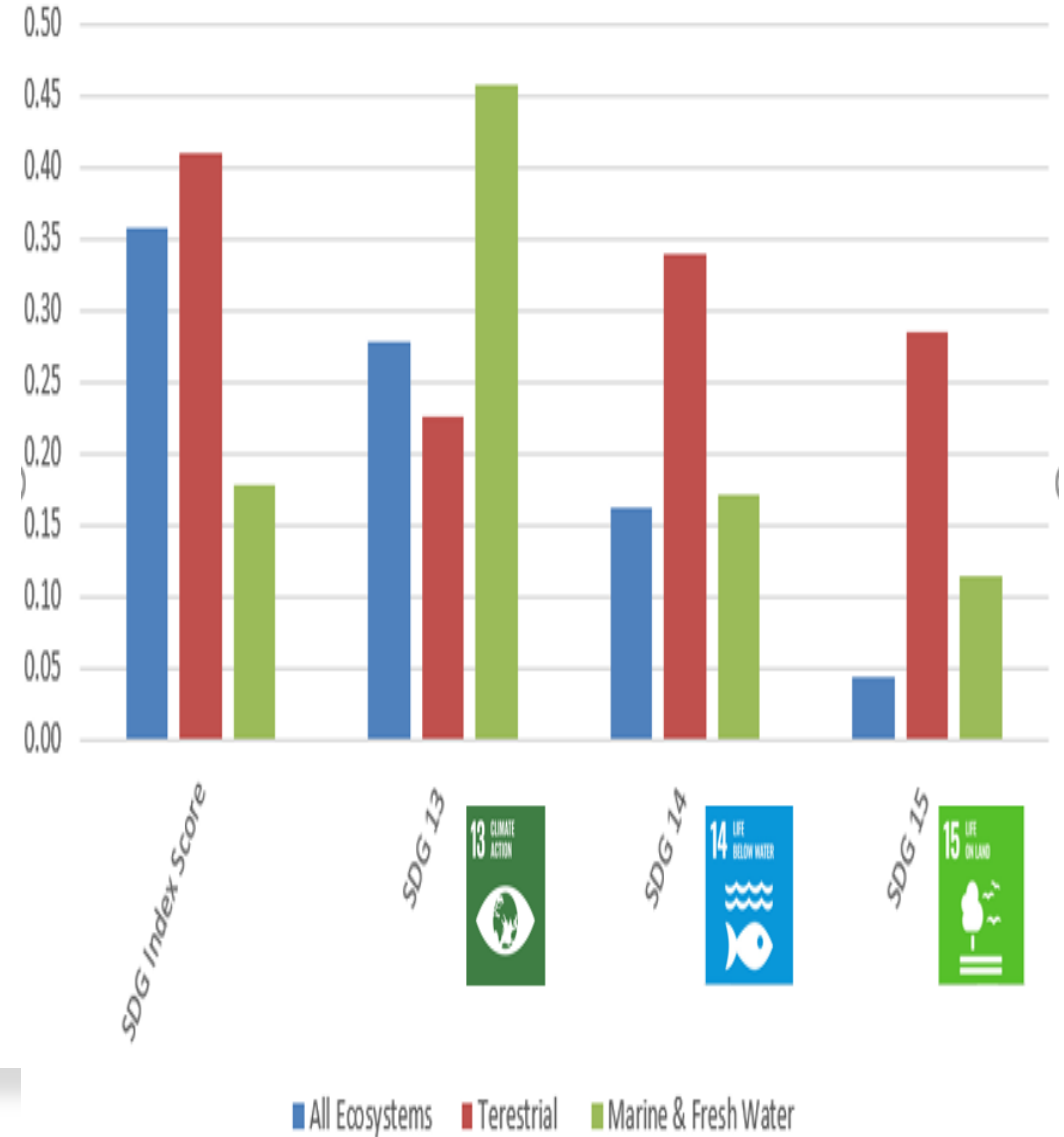
FISCAL INNOVATION
Distributional effects of key EU climate policies until 2050: Identifying measures to Mitigate Regressive Effects

Considering their simplicity, effectiveness, and deployability into EU, four key mitigating policy options were selected

Redistributing revenues through **lump-sum transfers** on per-head basis or **lowering VAT / taxes on electricity** to the general public

Implementation of **targeted energy efficiency measures** with no upfront costs, specifically targeting low-income households

Long-term **job retraining programmes** to avoid unemployment in affected industries

Funding of subsidies for new low-carbon technologies via general taxation or using carbon revenues to avoid uneven bearing of the costs

Detailed macroeconomic modelling based on the standard E3ME model baseline with an assessment of the existing policy best practices to explore the patterns of inequality in Europe (EU27 and the UK).

Combined mitigation policy options can ensure more equality, increase GDP and employment...

SDSN, EGD SWG report, 2022
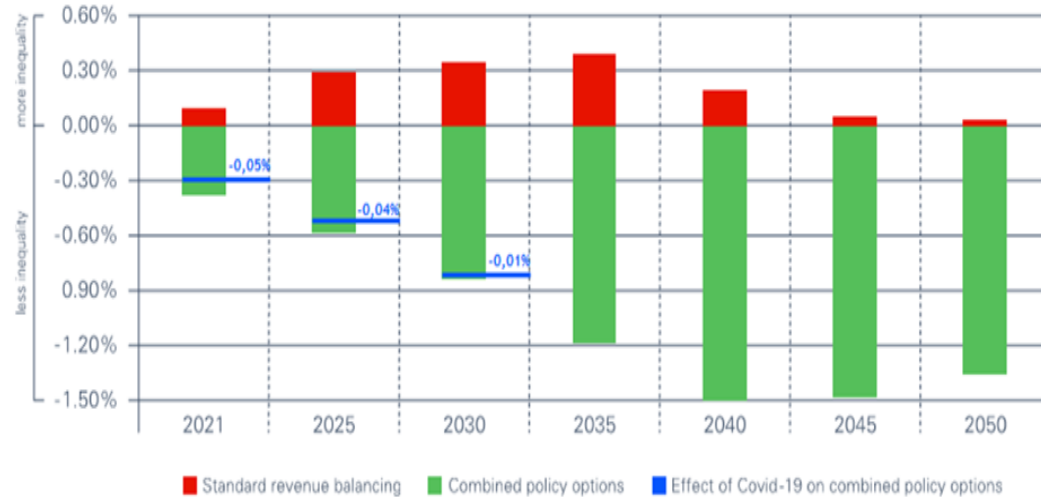
Mitigating the negative social impacts of climate policies is essential to ensure a broad support for the energy transition.

Regressive effects can be fully offset with targeted policies.

The SDG Stimulus puts forward three areas for immediate action:

The global economy is facing multiple shocks that are threatening to further reverse progress on the SDGs: COVID-19 pandemic, war in Ukraine, high inflation and weak economic growth, tightening monetary and financial conditions, and unsustainable debt burdens, escalating climate emergency

The impact of these shocks on developing countries is aggravated by an <u>unfair global financial system that is short-term oriented and crisis-prone, and that further exacerbates inequalities.</u>

UN SDGs Stimulus for Agenda 2030

Reform of the Global Financial Architecture, The Pontifical Academy of Social Sciences

1 Tackle the high cost of debt and rising risks of debt distress, by converting short-term high interest borrowing into long-term (more than 30 year) debt at lower interest rates.

2 Massively scale up affordable long-term financing for development, especially through public development banks (PDBs), multilateral development banks (MDBs), and by aligning all financing flows with the SDGs.

Advanced economies are nearing levels needed to shift trajectories toward net-zero.
Emerging & developing economies only at 20% of the levels
& face narrowing fiscal options
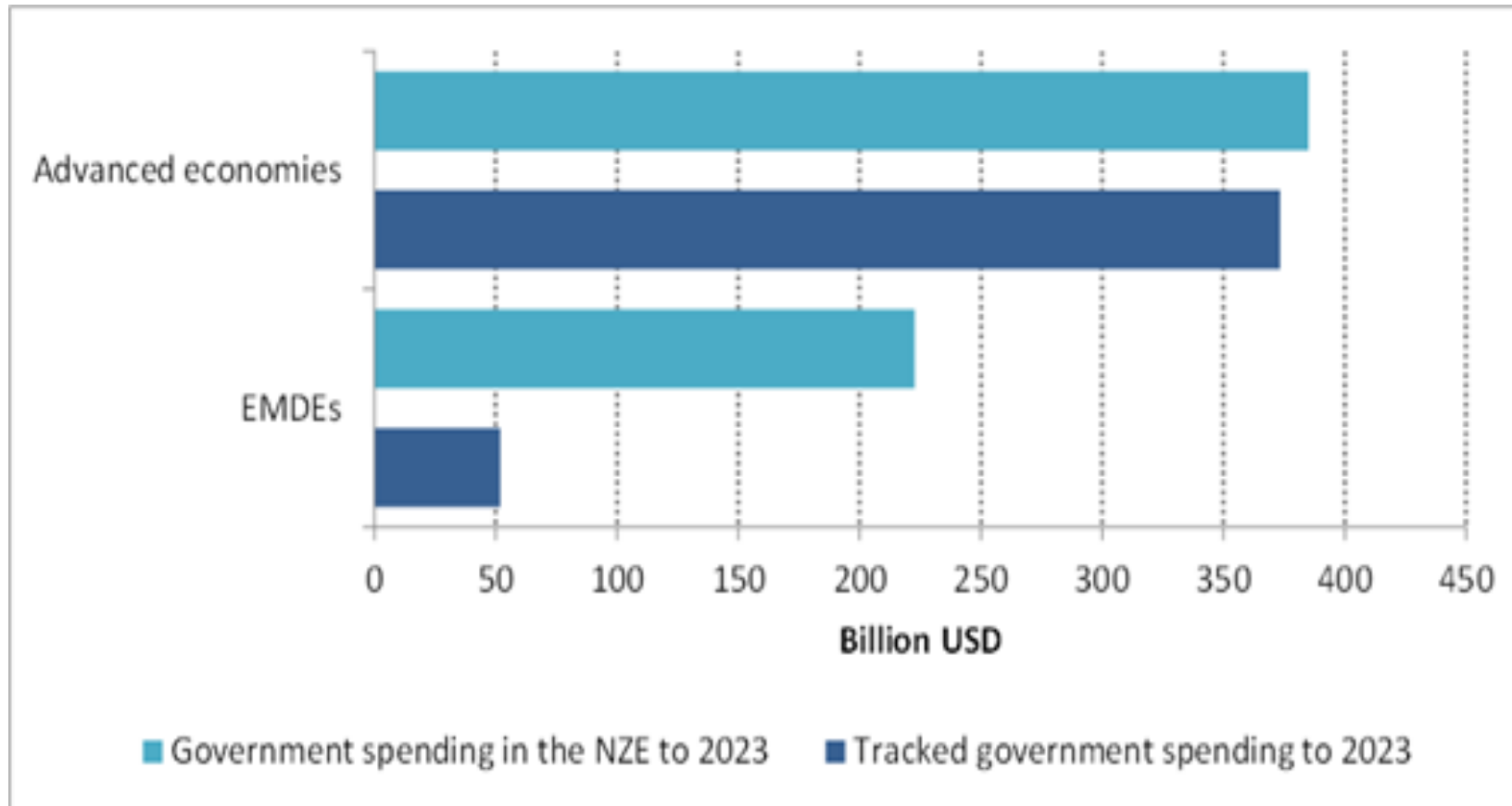
The Role of the Private Sector

- Private sector controls significant part of world's liquid assets: $275 trillion

- Importance of financial investments and strategic investment by private corporations

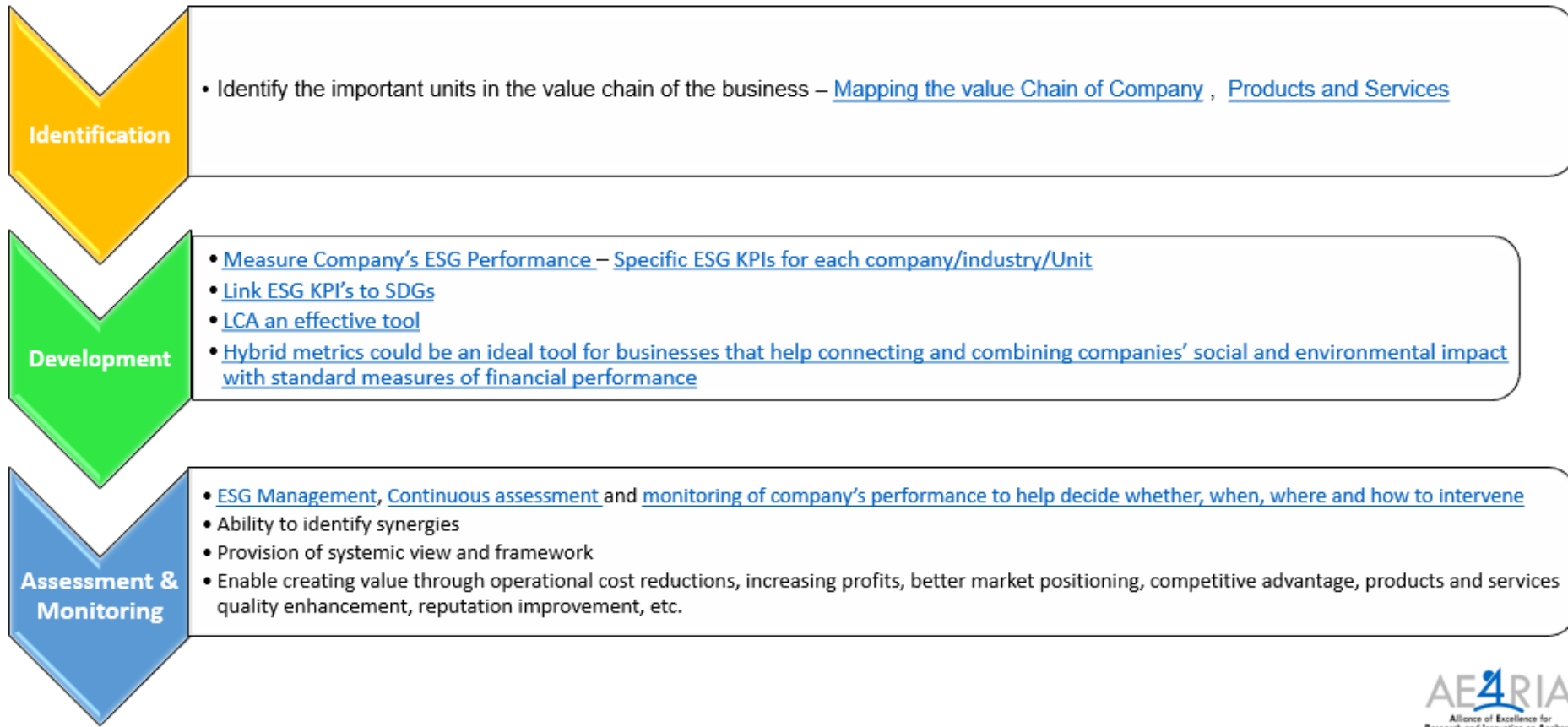- Finance industry increased SDG aligned financing by 20% in 2021

Annual SDG Financing Mobilised by Finance Industry Leaders (In US$bn)

392.4 | 244.8 | 224.4 | 217.0 | 215.1 | 180.4 | 162.4 | 136.5 | 131.9 | 129.7 | 123.6 | 98.8 | 83.8 | 73.4 | 68.0
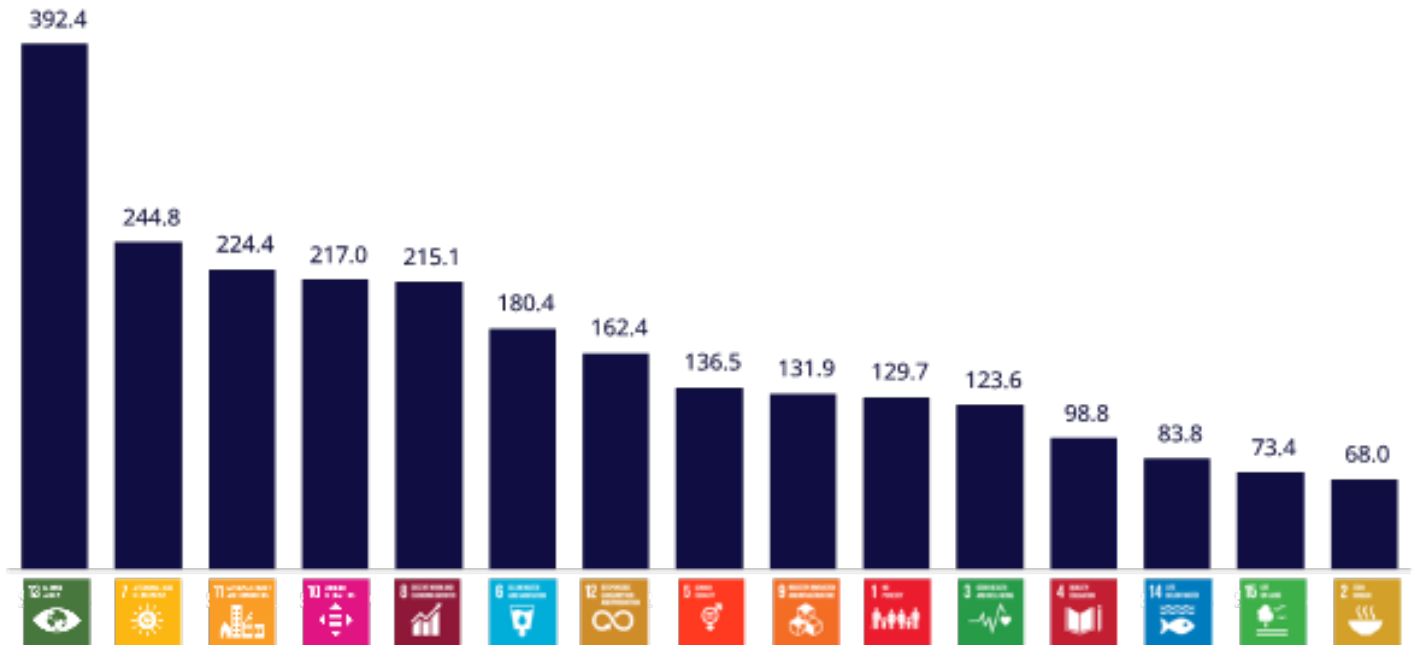
Source: Capital as a Force for Good Initiative

A Holistic Three-Step approach is necessary for <u>Companies</u> to create value and move beyond compliance-based codes

Identification
- Identify the important units in the value chain of the business – Mapping the value Chain of Company , Products and Services

Development
- Measure Company's ESG Performance – Specific ESG KPIs for each company/industry/Unit
- Link ESG KPI's to SDGs
- LCA an effective tool
- Hybrid metrics could be an ideal tool for businesses that help connecting and combining companies' social and environmental impact with standard measures of financial performance

Assessment & Monitoring
- ESG Management, Continuous assessment and monitoring of company's performance to help decide whether, when, where and how to intervene
- Ability to identify synergies
- Provision of systemic view and framework
- Enable creating value through operational cost reductions, increasing profits, better market positioning, competitive advantage, products and services quality enhancement, reputation improvement, etc.

AE4RIA
Alliance of Excellence for
Research and Innovation on Aephoria

Corporate Sustainability Reporting: Mapping ESG to SDG Goals and Targets

- **ESG KPI**s are mapped to SDGs Indexes.

- **Experts** Classification & **Machine/Deep learning** approaches to map ESG KPIs to the 232 Indicators of 17 SDGs.

- **Targets** are set for SDG Indicators following the common **UN SDSN** methodology.
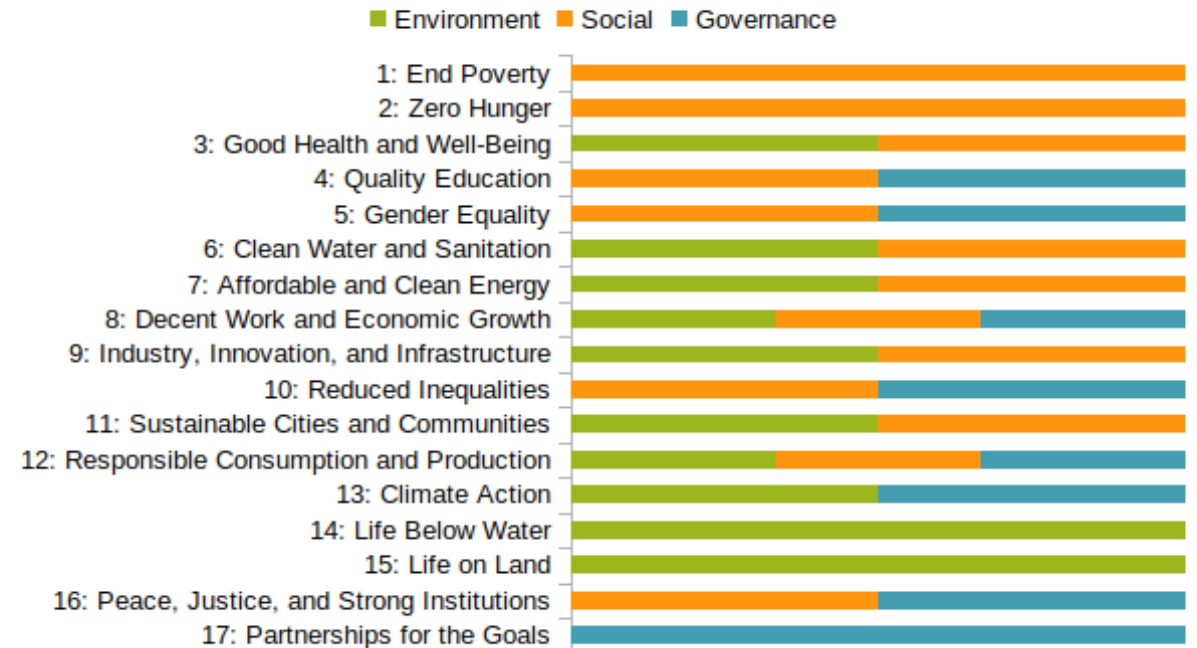
Dashboards: ● SDG achieved ● Challenges remain ● Significant challenges remain ● Major challenges

- Calculate Scores at any Level (Transformations/ ESGs / SDGs).

- Calculate the Company's **SDG Footprint** at a company/Unit/Product level.

- Calculate SDG **Trends/ Pathways** to 2030/2050.
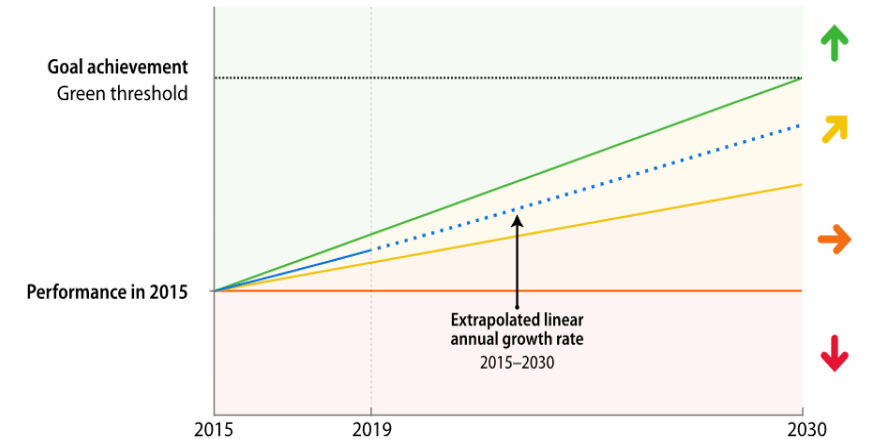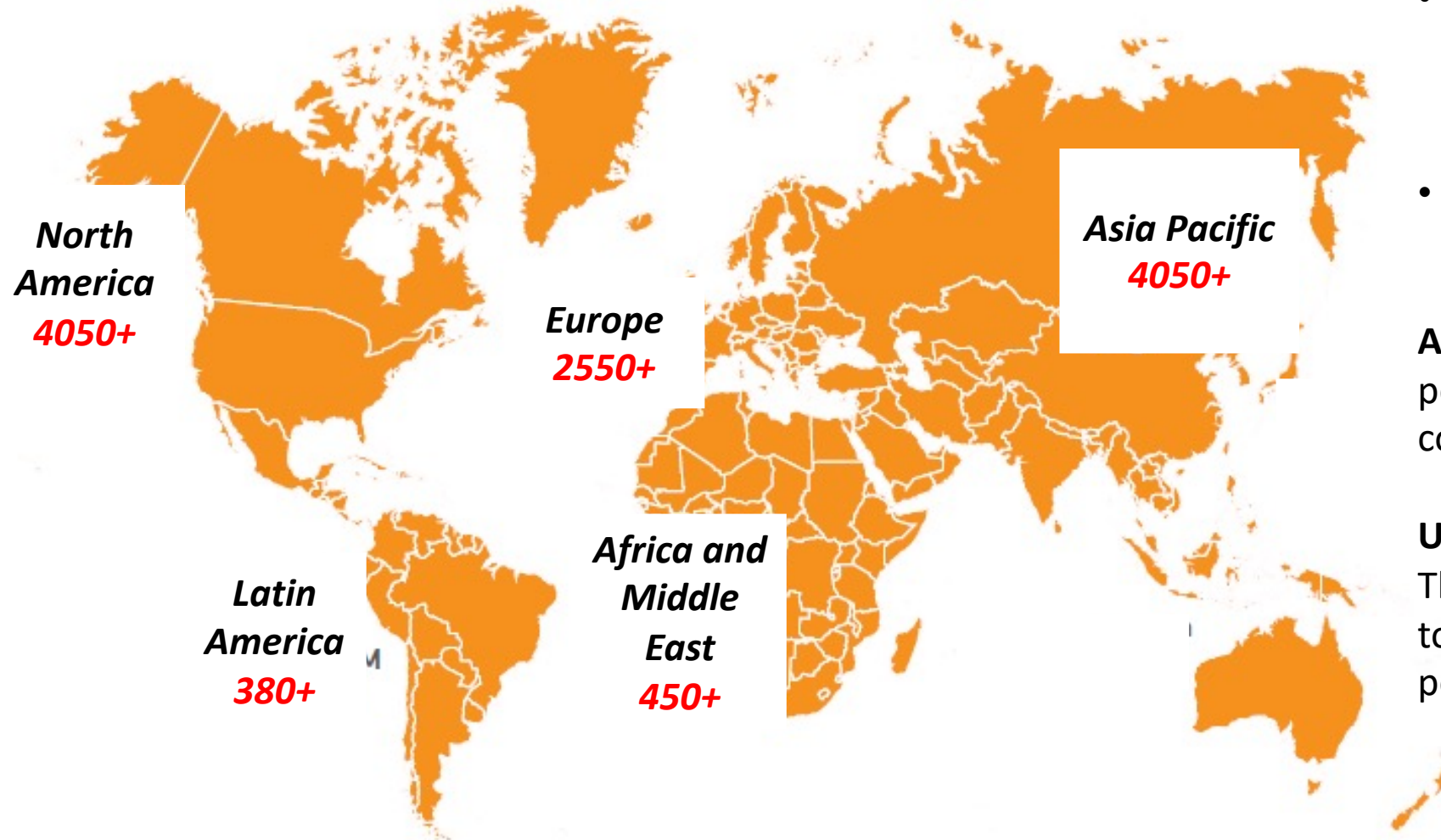
AE4RIA's SDG Pricing Factors

SDG Factor Mimicking Portfolia

Value of 1 dollar invested in an SDG-specific factor-miking portfolios, hedging against SDG related risk

AE4RIA's ESG Pricing Factors

ESG Factor Mimicking Portfolio vs Fama-French Factors

Value of 1 dollar invested in an ESG factor-mimicking portfolios - Hedging against ESG related risk

Legend:
- ESG
- RMRF
- SMB
- HML

Y-axis: Value of 1 $ Invested
X-axis: 2010, 2012, 2014, 2016, 2018, 2020, 2022, 2024
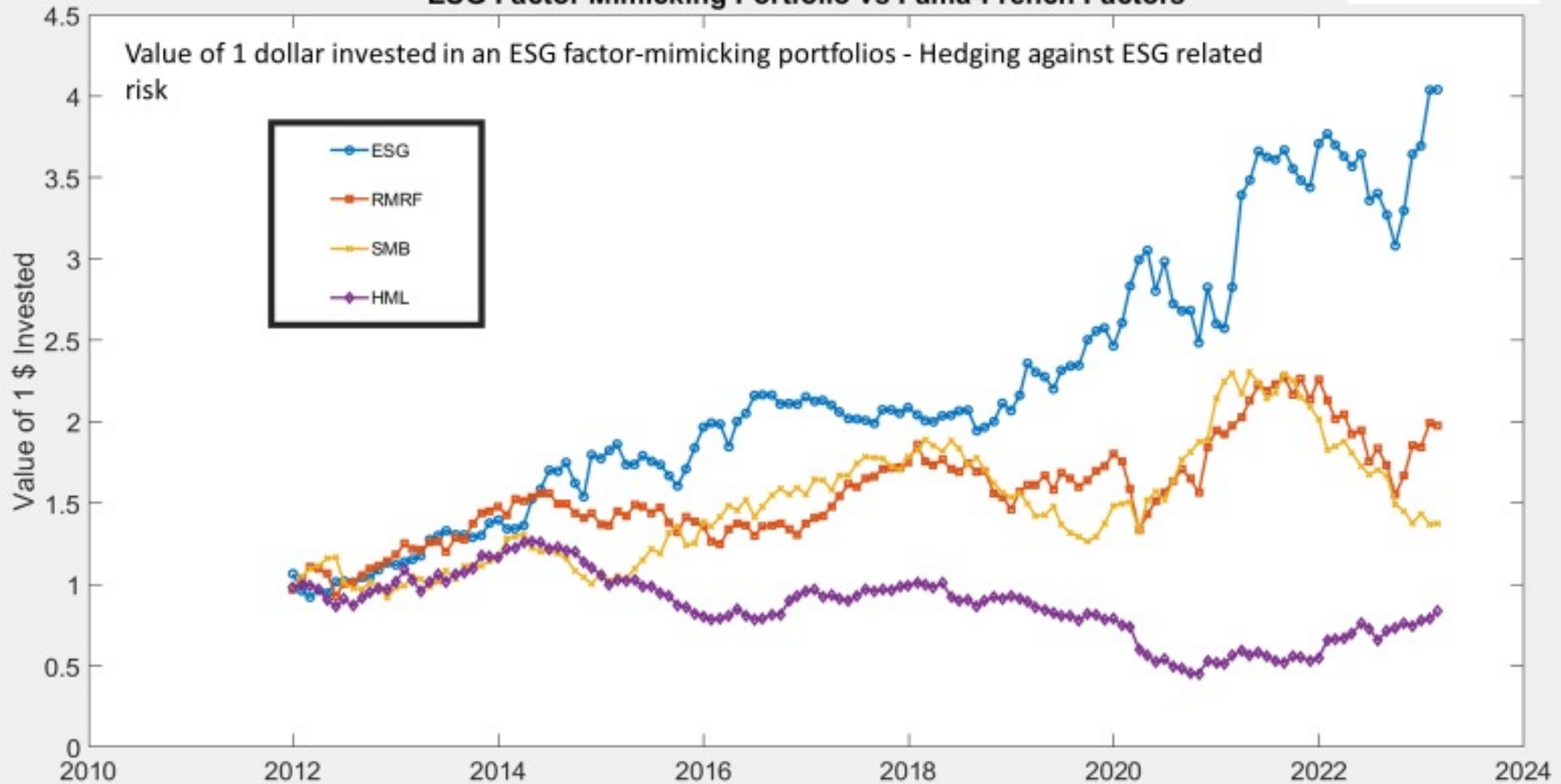
Transformative Participatory Approaches: National Living Labs and Systems Innovation

Head

Team

Models can provide the evidence, but people must make the decisions...

Our transformative and participatory approaches seek to bridge the gap between science, policy and society, by supporting key actors to utilize model outputs to make sustainable decisions.

Actors
Actions/ Innovations
Policies
Enablers
Finance
Barriers

Vision of what I want
Future
Present
1. Begin with the end in mind
2. Look backwards from the vision to the present
3. Move step by step towards the vision

Supporting Projects

SUSTAINIS: Sustainab islands: conditions, obs

SUSTAINIS
Grant agreement ID: EVK1-CT-2002-600
Duration: Start date 1 February 20
Budget: Overall € 120 054 EU con
Coordinated by WESTFAELISC

System Mapping as a Ser

It seeks to
- activate communities spread across recovery phase,
- set system mapping as a strategic kn
- provide new indicators and understa
- support local authorities in the neede planning challenges.

Deep Demon

- decarbonization of the Po
  - the second maritime
  - and a particular hots shipping industry em
- identify cause and effect dependencies and oppo breakthrough possibilities
- Creats innovation clust

Erasmus + | CATALYST: European VET Excellence Centre for Leading Sustainable Systems and Business Transformation

CATALYST: European VET Excellence Centre for Leading Sustainable Systems and Business Transformation

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Challenge owners: Piraeus Port A Port, Ministry of Shipping, Cyprus Implementation period: 2019-2022
- Budget: € 264,000
Find more at: https://www.athenara demonstration-projects-sustainab european-ports

Erasmus+

Methodologies

- Transformative Living Labs
- System Innovation and Transition Management
- Innovation Pathways
- Foresight methods such as Backcasting
- key actions and policy recommendations
- Living Lab Modeler Tool

Education, Training, Upskilling and Reskilling

Collaborations

SDGs Academy

Mission

To support the green and digital transition by educating and training people, building skills ecosystems, which will also be aligned with national, regional, local and sectoral green strategies. The educational programs will be delivered under six themes corresponding to the Six SDG Transformations namely:

Supporting Projects

SDGs measu...

SDSN Greece in collaboration with RB...
University of Economics and Busine...
Education, Research, Infrastructure a...

The Study will compile the results f...
participate in the project which is coo...

The report is expected to be comple...

Duration: Start date: 10 May 202...

EIT HEI INITIAT...
Innovation Cap...
for Higher Edu...

Accelerating Innovati...
Startup Development

EUAcceL.

Clima...

Single...

BL.EU Climate

- CO2 emissions reductions
- plastic **marine littering** in s... waters through **innovatio**
- addressing the issue at the... life cycle, on the **preventio**... production of plastic materi...
- deliver a **roadmap** for plast... European seas for the next...

Countries: Portugal, Greece, Croati...
Implementation period: 2019
Find more at: https://www.athenarc...
innovation-southern-european-wate...

ERASMUS+ | TICHE Academy: T...
Holistic economies

TICHE (Academy): Training Innovation for Circularity and Holistic economies

Erasmus KA2 project- Cooperation Partnership for innovation in VET

The primary goal of Cooperation Partnerships is to allow organizations to increase the qu... relevance of their activities, to develop and reinforce their networks of partners, to increa... capacity to operate jointly at transnational level, boosting internationalization of their activi... through exchanging or developing new practices and methods as well as sharing and con... ideas. They aim to support the development, transfer and/or implementation of innovative p... as well as the implementation of joint initiatives promoting cooperation, peer learn... exchanges of experience at European level. Results should be re-usable, transferable, up-... and, if possible, have a strong transdisciplinary dimension. Selected projects will be exp... share the results of their activities at local, regional, national level and transnational level.

HORIZON 2020

Evaluation Study on the implementation of Cross Cutting Issues in Horizon 2020

Tender: DG RTD

Duration: 10 months (November 2021 – August 2022)

Budget: 249.850euro

Prof. Phoebe Koundouri, ATHENA RC is a senior expert in Sustainable Development, Climate Change and Biodiversity Case Study.

Xaris Papageorgiou, ATHENA RC is a senior expert in Social Sciences and Humanities and Interdisciplinarity Case Studies.

Dr. Conrad Landis, Senior Researcher, Adjunct Lecturer, AUEB

1. Which **stakeholder group** are you from?

- **1 Business organisation**
- **4 Civil society or non-governmental organization**
- **1 EU institution**
- **1 Regional or local organisation**
- **2 Research organisations**

2. On a scale from 1 (not actively) to 10 (very actively), **how involved** is your organisation on the topic of skills and vocational training?

7.1 (mean)

3. Is your organisation involved in **specific activities or projects** aimed at improving green skills, e.g. by mapping and defining green skill shortages?

- **Course on ethics in chemistry covering sustainability**
- **Building trainings for rural entrepreneurs**
- **Green and digital transitions, 'green marketing' campaigns, green transition impacts**
- **Research on social impacts**
- **EGD scenarios, green foresight in sectors, green skills identification via online job ads**
- **Sustainability education programmes for students at upper secondary and university**
- **Mapping and defining green skills**
- **Competent people and their high-quality skills**

4. On a scale from 1 (not important) to 10 (very important), **how important are**, in your view, **green education and skills** as an enabler to tackle the triple planetary crisis – **climate change, biodiversity loss and pollution** – with a view to steer the transition towards an increasingly cleaner and fairer circular economy?

8.6 (mean)

5. How could your organisation best **support the acceleration towards greener skills and jobs**?

*Support youth entrepreneurship, engaging the community, running the transformation process
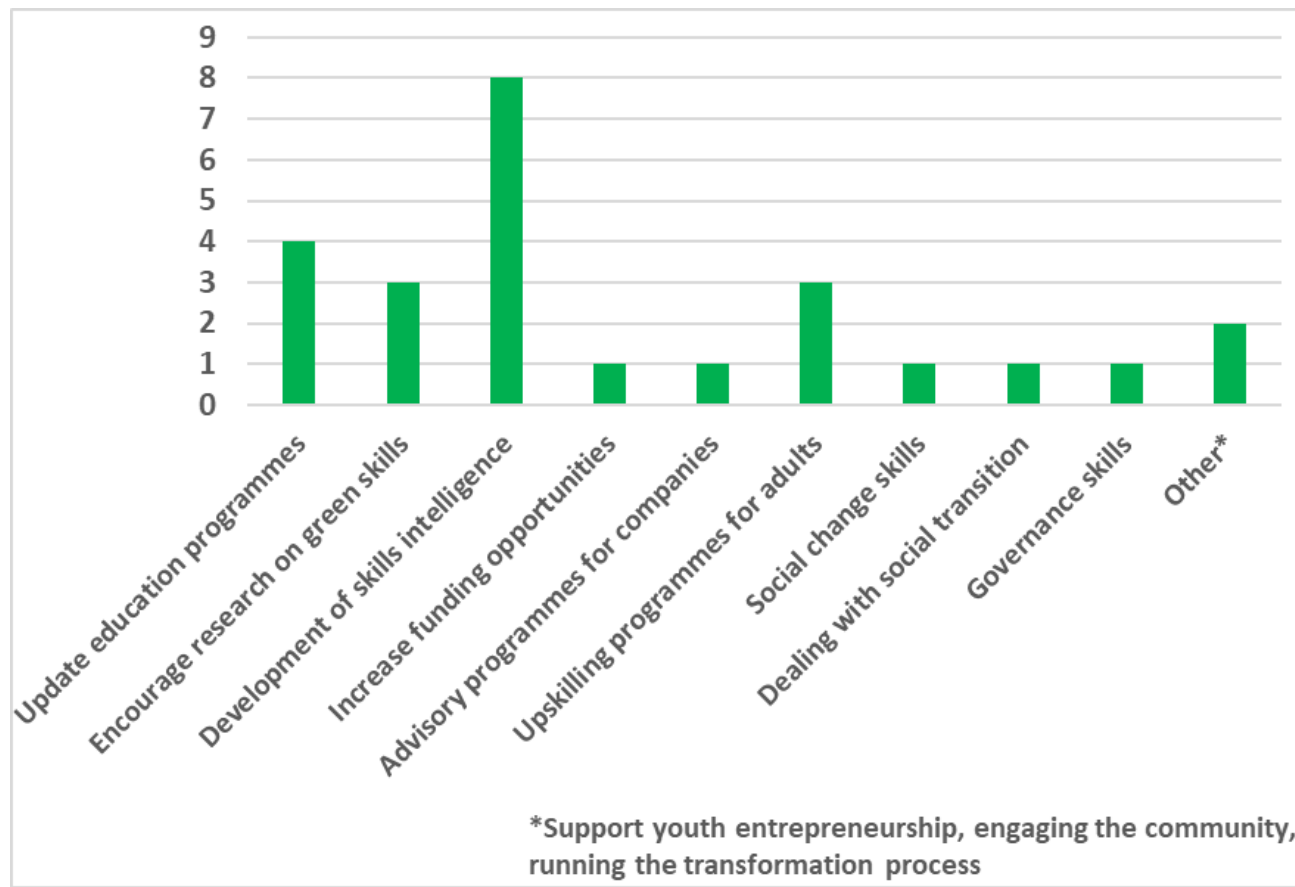
6. In your opinion, which **new skills are needed for the green and digital transition** to deliver on the Green Deal and Zero Pollution agenda? Please, specify whether for each of them this is at local, regional, national or EU level.

- Trainings for repair activities (local and regional)

- Material resources on C&D sector

- Blue-collar workers, IT experts and engineers

- Skills related to green technologies (renewables, electrification, material circularity)

- Interdisciplinar, applied research (EU)

- AI and digital skills (European, national, regional)

- Digital/AI, Managerial skills, STEM skills applied in greening, skills to change hearts and minds

- Transformation and learning to change

- Education and training, innovative thinking/ acting, use of decision making tools.

- Problem solving (National, regional)

7. In relation to jobs for the green transition, in which of the following **sectors** do you **expect that most new jobs are going to be created** in the near and mid-term future?
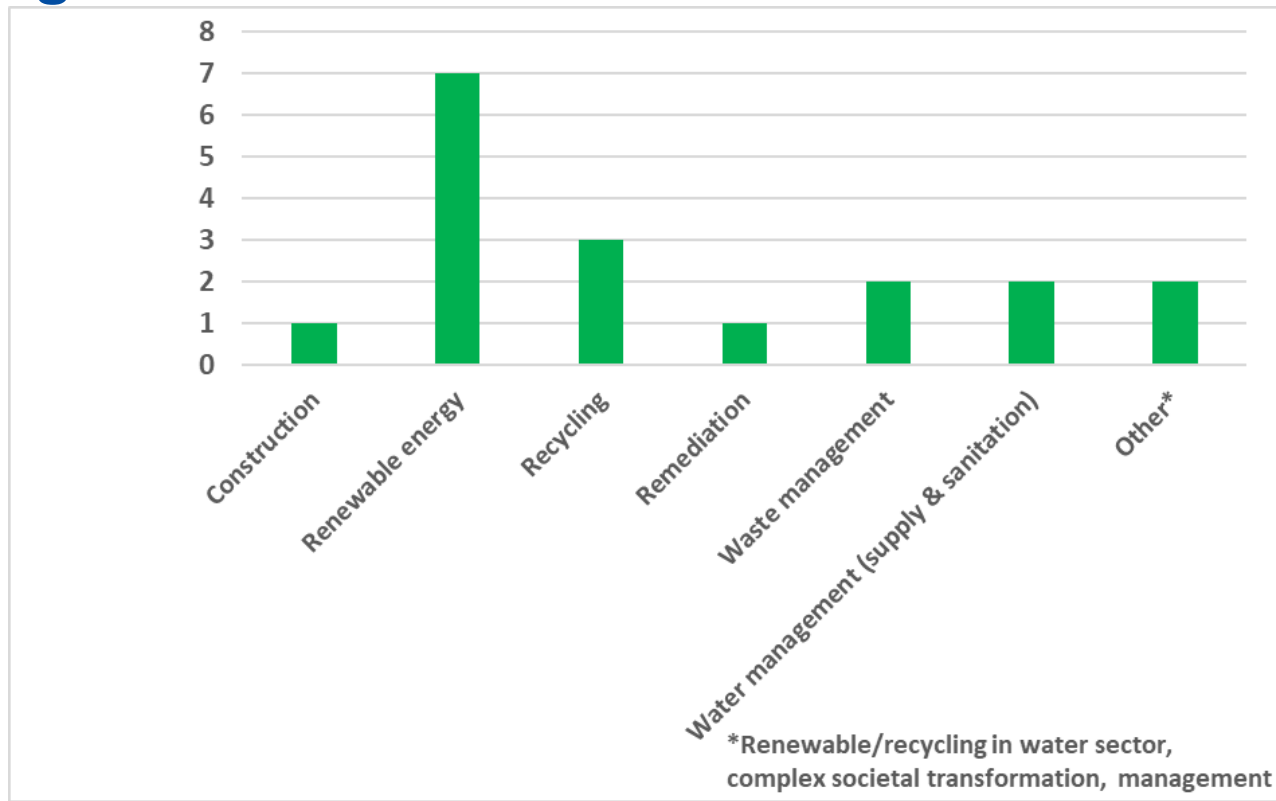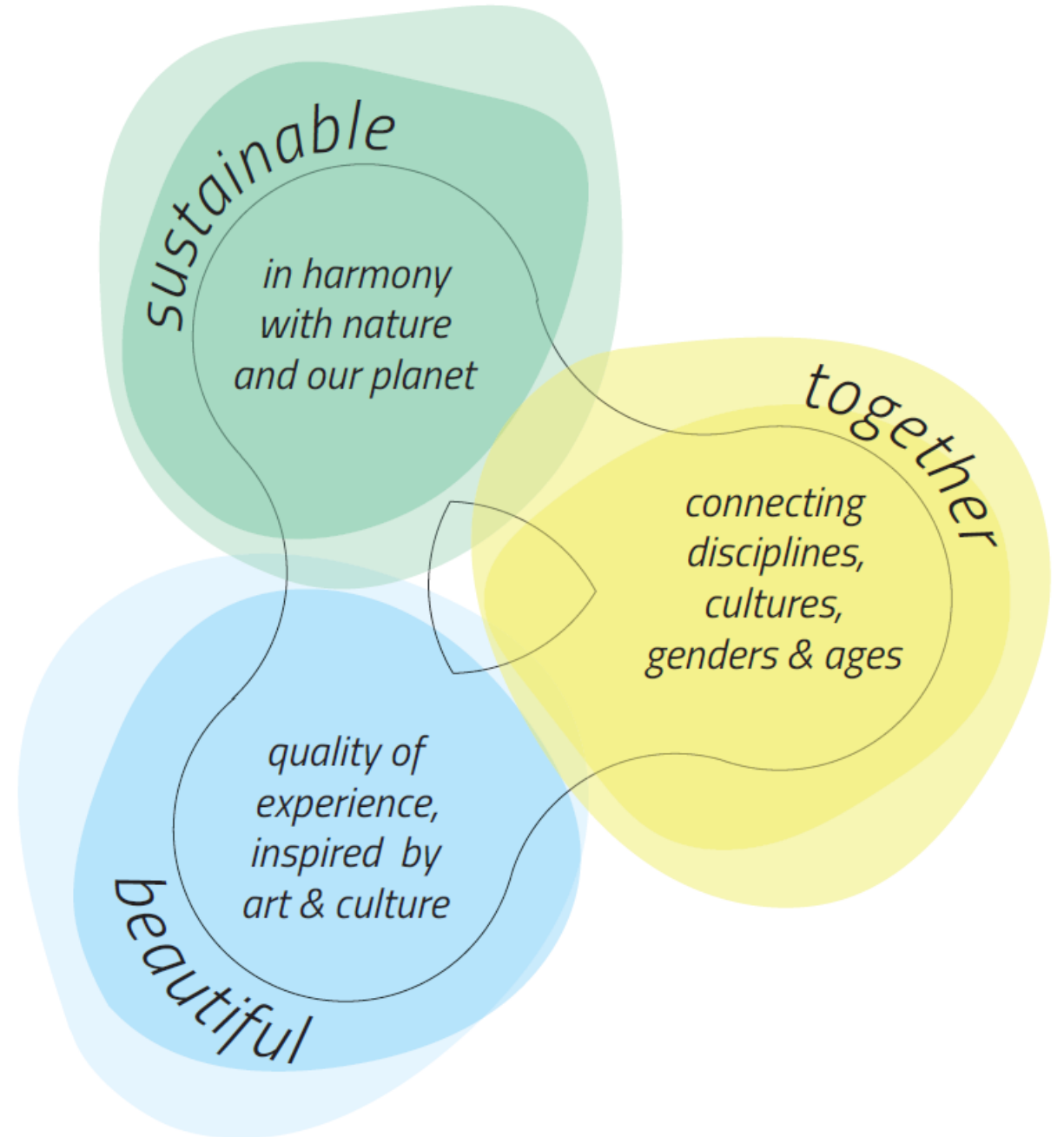

*Renewable/recycling in water sector, complex societal transformation, management

New European Bauhaus (NEB): Imagining and building a future that is 'Beautiful, Sustainable and Together'

New European Bauhaus
From concept to action

New European Bauhaus Team
Directorate-General Joint Research Centre,
European Commission

sustainable
in harmony
with nature
and our planet

together
connecting
disciplines,
cultures,
genders & ages

beautiful
quality of
experience,
inspired by
art & culture

New European Bauhaus values

From climate goals, to circularity, zero pollution, and biodiversity

Inclusion, from valuing diversity and equality for all, to securing accessibility and affordability.

Aesthetics, quality of experience and style, beyond functionality

sustainable
in harmony with nature and our planet

together
connecting disciplines, cultures, genders & ages

beautiful
quality of experience, inspired by art & culture
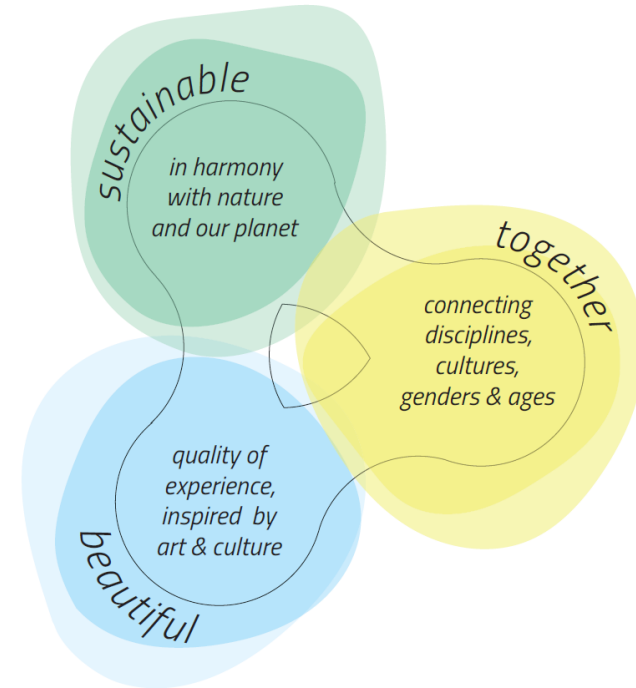
New European Bauhaus

New European Bauhaus

Principles:
Global/local, participatory and transdisciplinary approach

Thematic axes of the transformation path:

- Reconnecting to nature

- Regaining a sense of belonging

- Prioritising the places and people that need it the most

- The need for long term, life cycle thinking in the industrial ecosystem

Delivery

Cross-policy and cross-programmes

- Mobilizing a set of EU programmes (Creative Europe, Horizon Europe, Single Market Programme, LIFE, EIT, etc.)
- Calling on Member States to mobilise EU resources in shared management (cohesion policy) + RRFs

Impacts at 3 levels

- Transforming places on the ground
- Transforming the enabling ecosystem for innovation
- Diffusing new meanings through education and culture

Delivery (europa.eu)

Funding opportunities (europa.eu)

New European Bauhaus

NEB Community

698   **Official Partners**
non political and non-for profit organisations

19   **Members of the High-Level Round Table**
practitioners in different fields relevant to NEB

173   **NEB Prize winners & finalists**
promoters of inspiring projects illustrating the NEB triangle of values

27   **National Contact Points**
public authorities coordinating national efforts to implement the initiative

170   **Friends**
companies and public authorities

>   **NEB dedicated calls' beneficiaries**

>   **NEB Team & other relevant EC colleagues**

The Dashboard

The dashboard is a dynamic interactive map showing information on NEB projects and key actors across Europe and beyond.

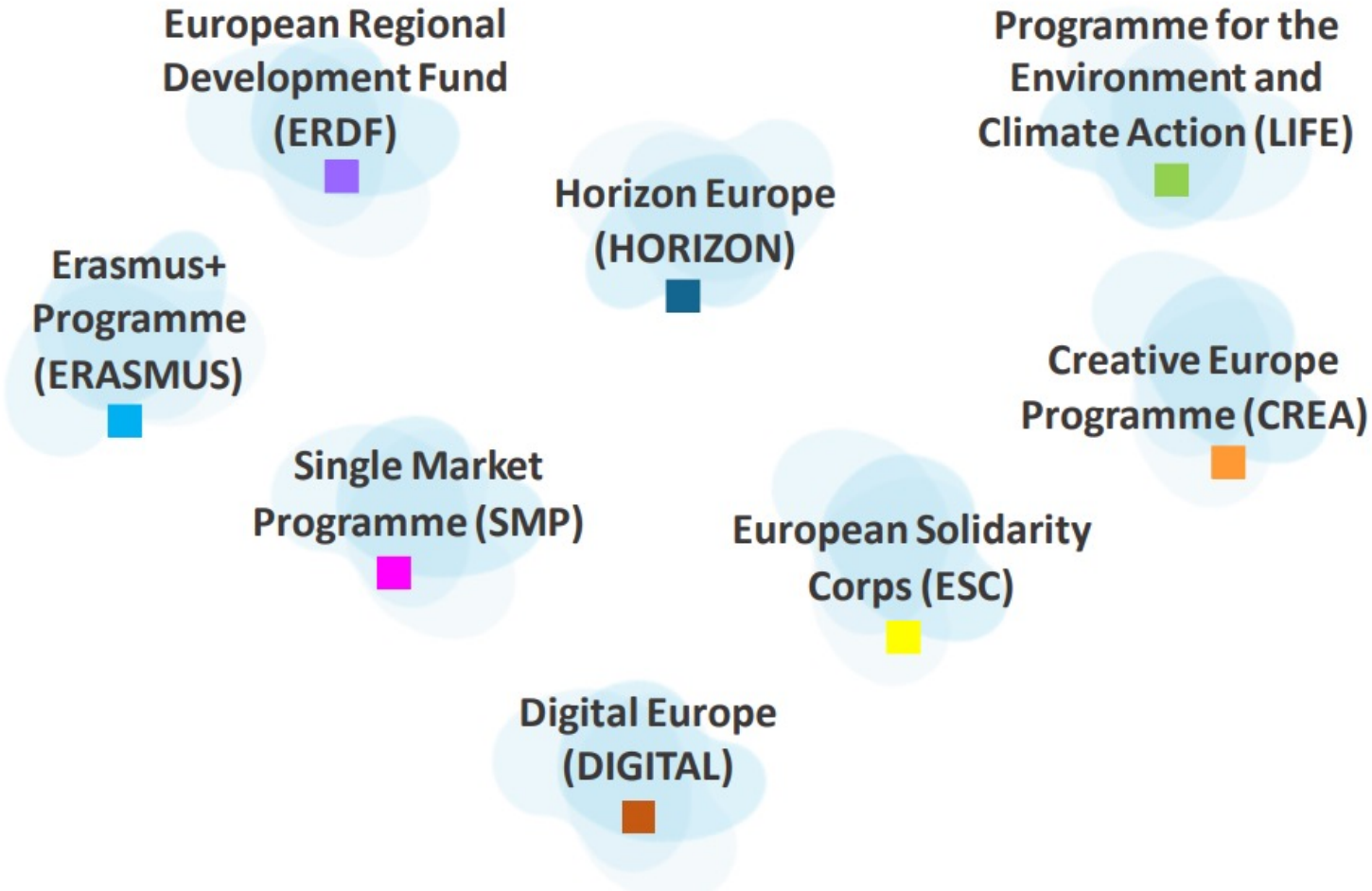The map evolves as the NEB community continues to grow.
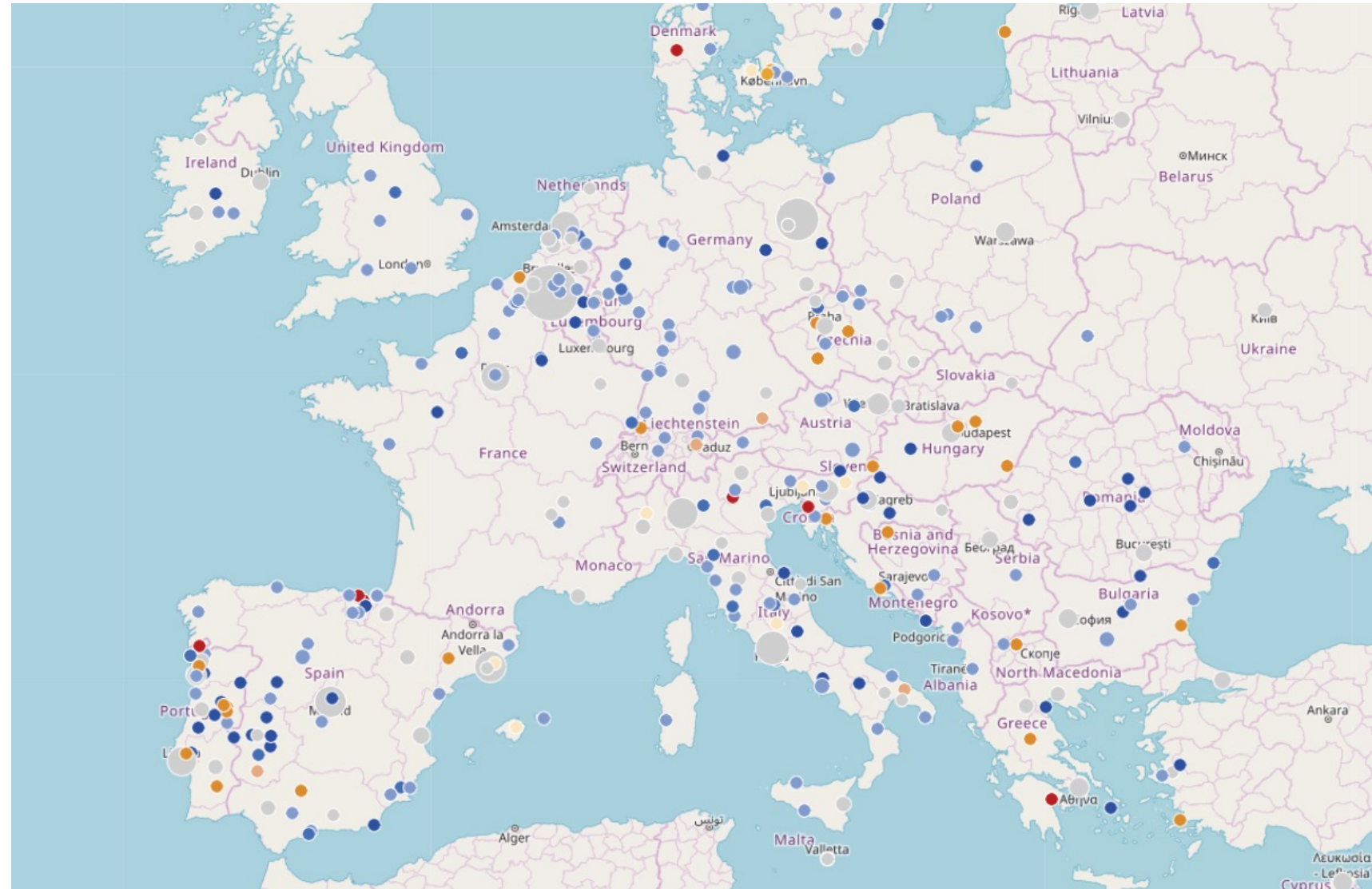
NEB Academy

As one flagship initiative of the European Year of Skills, the European Commission will launch a **New European Bauhaus Academy** to promote **skills for the development** and **use of biobased materials** as well as **circularity** in the construction sector.

- Training modules for bio-based materials, nature-based solutions , and circularity.
- Targeted to the different construction professionals

- Online platform
- Integrating existing material, including from MS
- Available in all EU languages
- Easy search
- Support on-site trainings
- Communicate, scale up
- Large-scale deployment

New European Bauhaus

NEB funding opportunities

Overview of EU funding opportunities to support the achievement of the New European Bauhaus objectives (2023-2024)

European Regional Development Fund (ERDF)

Programme for the Environment and Climate Action (LIFE)

Horizon Europe (HORIZON)

Erasmus+ Programme (ERASMUS)

Creative Europe Programme (CREA)

Single Market Programme (SMP)

European Solidarity Corps (ESC)

Digital Europe (DIGITAL)

https://europa.eu/new-european-bauhaus/get-involved/funding-opportunities_en

New European Bauhaus
beautiful | sustainable | together

TRANSFORMATION
OF PLACES OF LEARNING

REGULATORY ANALYSIS
AND EXPERIMENTATION
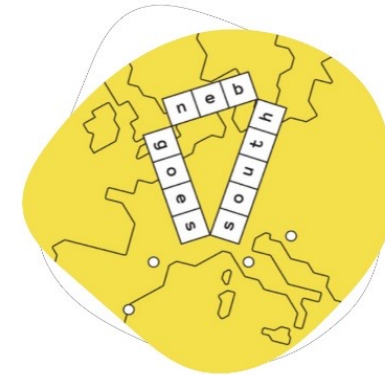
NEB GOES SOUTH

INNOVATIVE FUNDING

NEB Lab
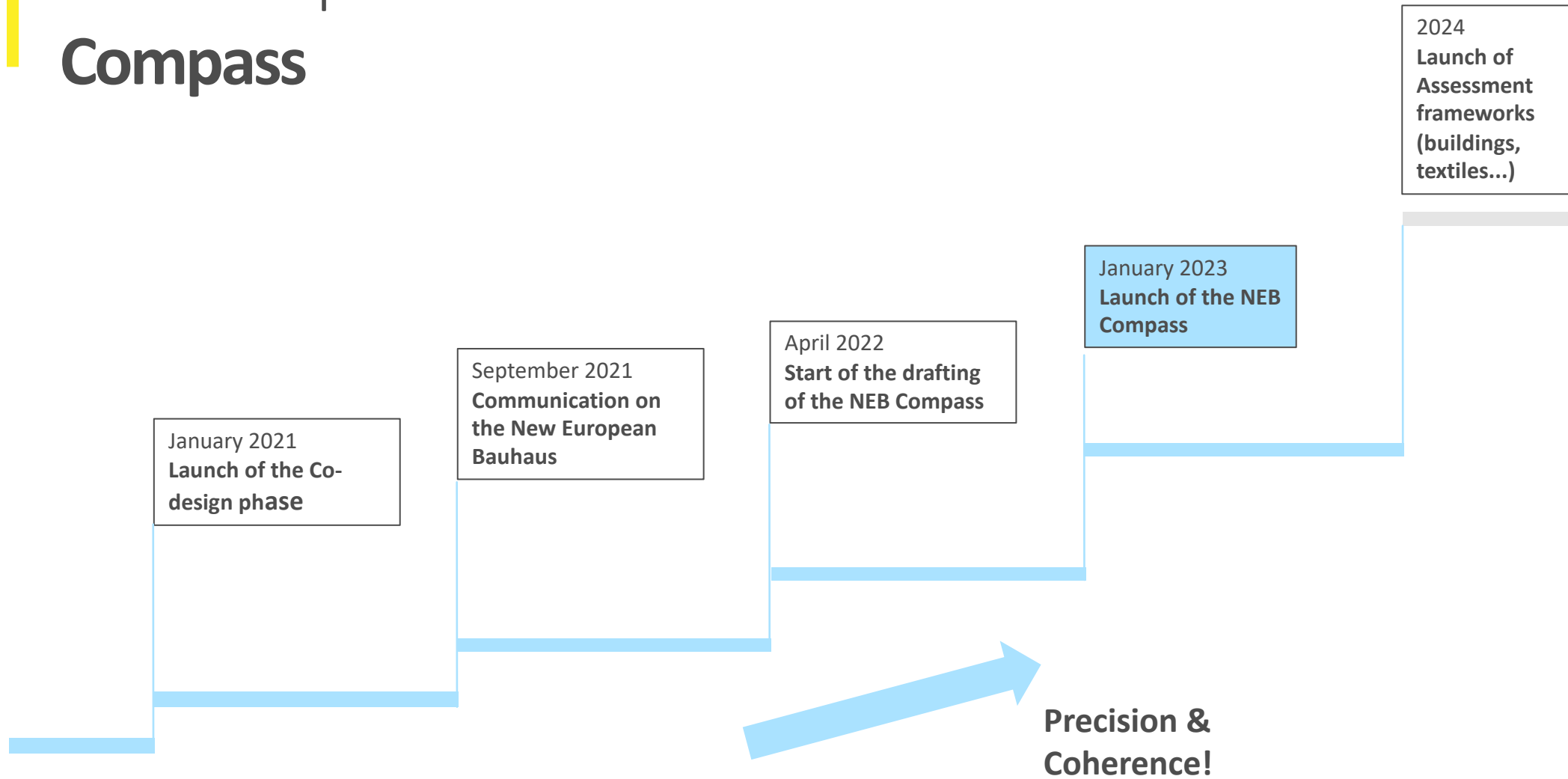
NEW EUROPEAN BAUHAUS
OF THE MOUNTAINS

LABELLING STRATEGY

ACTIONS FOR UKRAINE

NORDIC CARBON NEUTRAL BAUHAUS

https://new-european-bauhaus.europa.eu/about/neb-lab_en

New European Bauhaus
Compass

2024
Launch of Assessment frameworks (buildings, textiles...)

January 2023
Launch of the NEB Compass

April 2022
Start of the drafting of the NEB Compass

September 2021
Communication on the New European Bauhaus

January 2021
Launch of the Co-design phase

Precision & Coherence!

New European Bauhaus
Compass

New European Bauhaus Compass

What is it?

- a framework to guide decision and project makers **at the design phase**
- covering **all type of NEB projects** (building, education model, event...)

Why?

- to equip all NEB stakeholders with a **shared vocabulary and understanding** of the three values and working principles
- to strengthen NEB projects with ambitious and integrated objectives

How?

- with the definition of **3 levels of ambitions** for each value and principle, accompanied by examples and **sets of guiding questions**
- with an **evolving logo** that helps visualizing how "NEB" a concept is, and a series of illustrative **case studies**
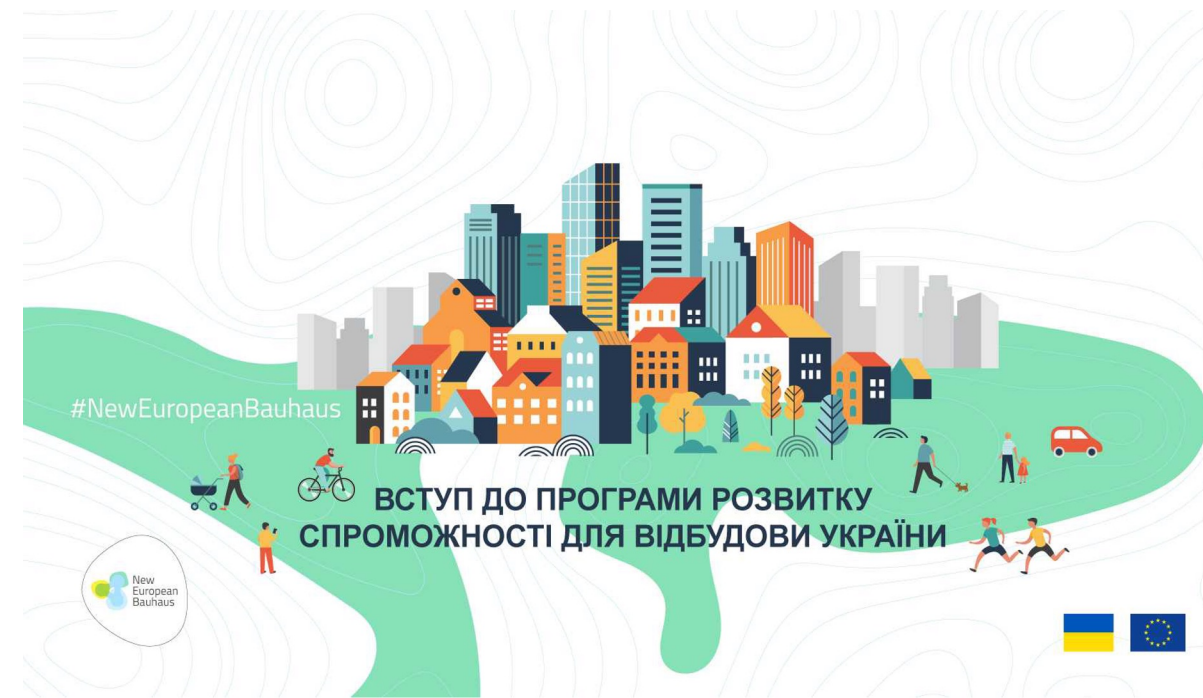
New European Bauhaus

New European Bauhaus
Compass
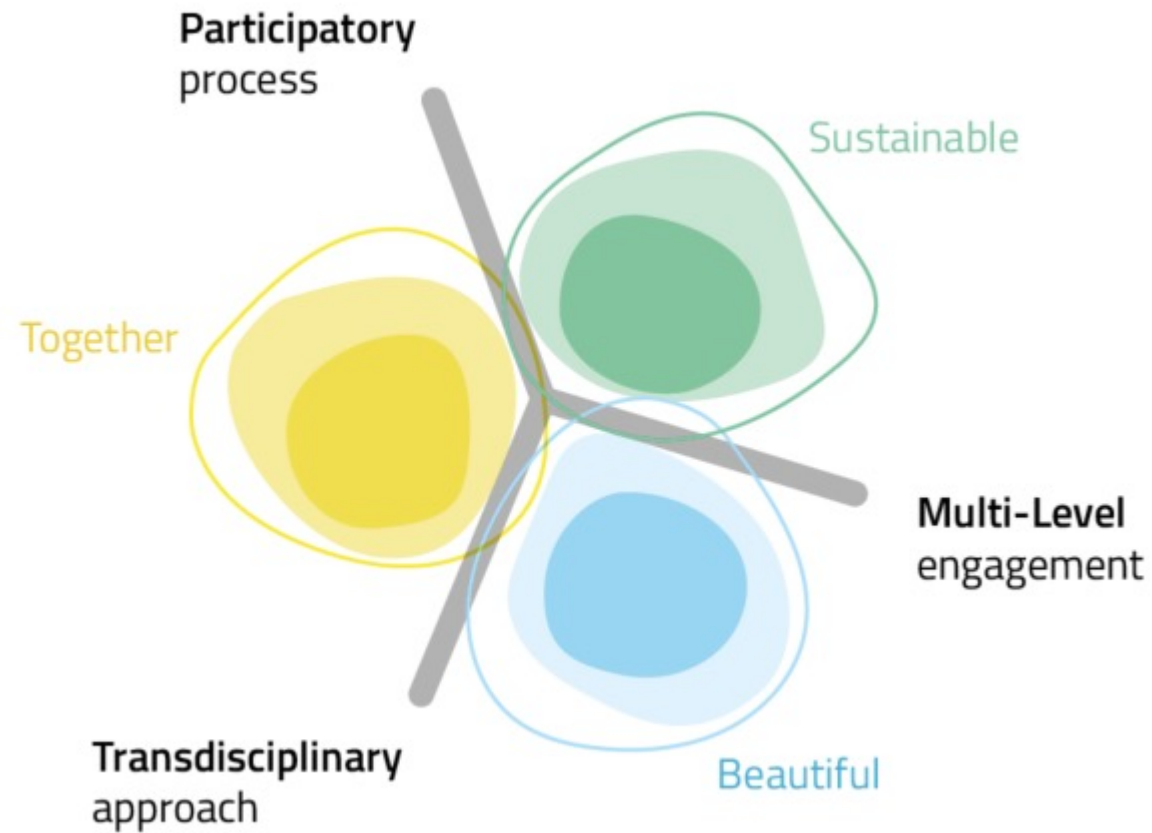
Actions in Ukraine

- Pilot capacity-building programme based on the needs identified in three reports (Housing Urgency, Circular Housing and Capacity Building)

- 3 thematic modules (Getting organised for reconstruction, Circularity and Energy Efficiency, Housing Redevelopment and Maintenance)

- 3 curators and 30 involved speakers from Ukraine and Europe

- 560 unique applicants for Modules 1/ 2/ 3

- 65 hromadas/regions teams from all Ukrainian regions have participated:

- 150 most active participants received completed all obligatory tasks and received Certificates

- 30 teams in all Modules have done project non-obligatory tasks and presented that in summary sessions

#NewEuropeanBauhaus

New European Bauhaus

ВСТУП ДО ПРОГРАМИ РОЗВИТКУ СПРОМОЖНОСТІ ДЛЯ ВІДБУДОВИ УКРАЇНИ

New European Bauhaus

Why a Mission?

Call for the next step of the New European Bauhaus

Research and Innovation analysis for the NEB with the research community

European Parliament Own Initiative Report

NEB Community projects across the EU

New European Bauhaus

What challenges would a NEB Mission address?

UN VOLUNTEERS

© Anadolu Agency/Getty Images

"THE ERA OF GLOBAL BOILING HAS ARRIVED"

António Guterres, UN Secretary General,

Challenge 1: Climate change is accelerating, and the pace of transformation remains too slow.

## China's Green Building Materials Sector: Policies and Investment Opportunities

November 18, 2022 Posted by Qian Zhou Written by Yi Wu Reading Time: 5 minutes

China's green building materials sector presents great opportunities for foreign investment, given the country's vast real estate market and ambitious plans to meet high environmental standards and serve climate-conscious goals. Foreign investors are advised to keep a close eye on policy developments impacting this sector.
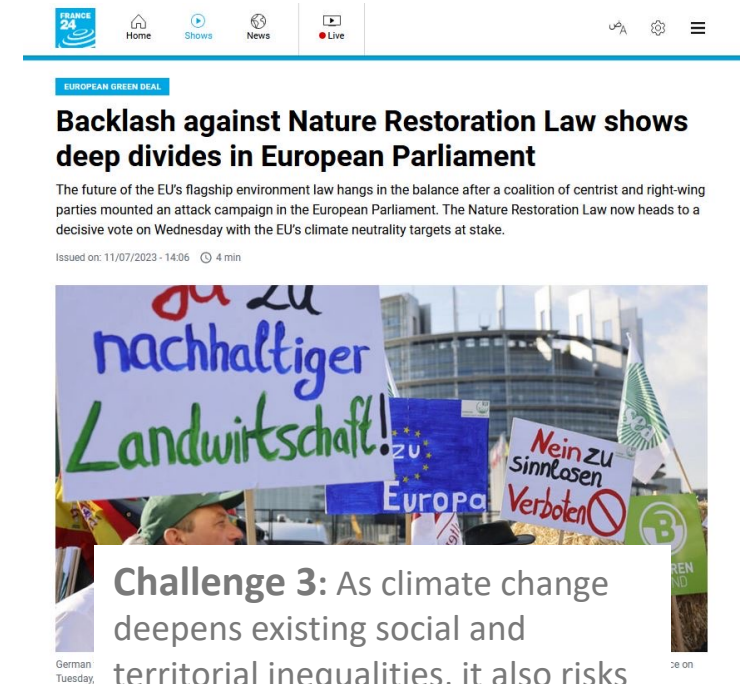
What makes China's innovation ecosystem unique?

China's climate goals and the importance of green building materials
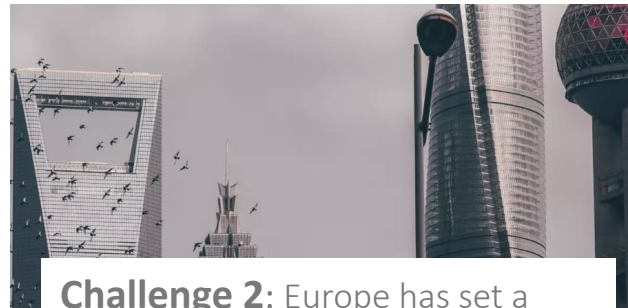
Challenge 2: Europe has set a major ambition to be a world leader in green transformation, but can the industry follow?

FRANCE 24 Home Shows News ● Live

EUROPEAN GREEN DEAL

Backlash against Nature Restoration Law shows deep divides in European Parliament

The future of the EU's flagship environment law hangs in the balance after a coalition of centrist and right-wing parties mounted an attack campaign in the European Parliament. The Nature Restoration Law now heads to a decisive vote on Wednesday with the EU's climate neutrality targets at stake.

Issued on: 11/07/2023 - 14:06 ⏱ 4 min

Challenge 3: As climate change deepens existing social and territorial inequalities, it also risks eroding trust in democratic institutions.

New European Bauhaus
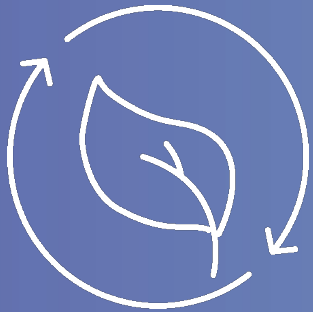
What would this new Mission focus on ?

**Revitalise European neighbourhoods
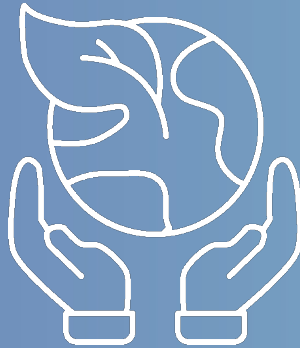with design for sustainability and inclusion**

New European Bauhaus

Research & Innovation Components

Circular & regenerative processes for the construction ecosystem

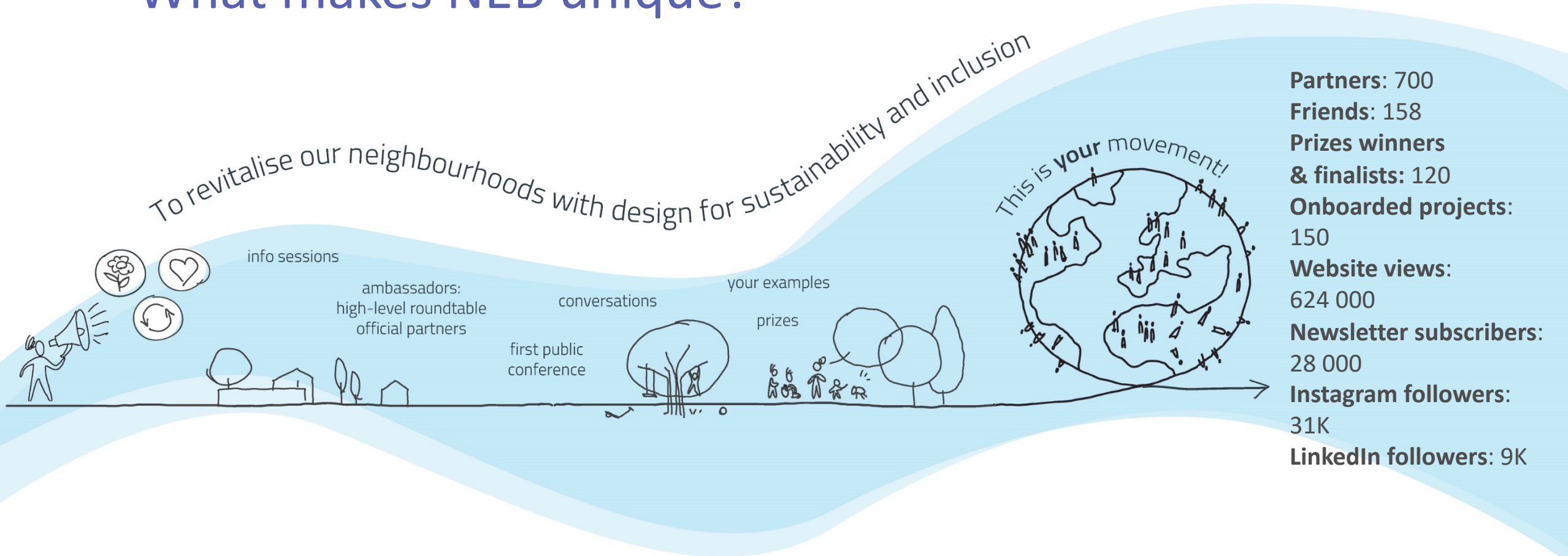Green transformation and local democracy

New funding and business models for circularity in the built environment

European Commission

What do we build on?
What makes NEB unique?

To revitalise our neighbourhoods with design for sustainability and inclusion

info sessions

ambassadors:
high-level roundtable
official partners

first public
conference

conversations

your examples

prizes

This is **your** movement!

Partners: 700
Friends: 158
**Prizes winners
& finalists**: 120
Onboarded projects:
150
Website views:
624 000
Newsletter subscribers:
28 000
Instagram followers:
31K
LinkedIn followers: 9K

New European Bauhaus

- #NewEuropeanBauhaus
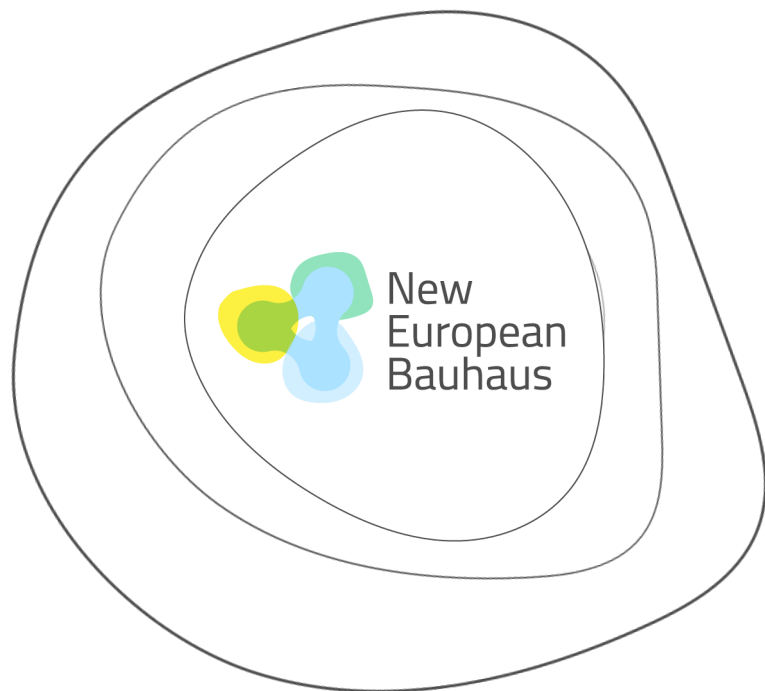
- **Web:** https://europa.eu/new-european-bauhaus

- **Instagram:** @neweuropeanbauhaus

- **Pinterest:**
https://www.pinterest.com/eucommission/new-european-bauhaus/

- **Newsletter**:
https://europa.eu/new-european-bauhaus/stay-touch/e-zine_en

New European Bauhaus

Thank you !

ATELIER

The la rosa necklace
material: bamboo, real gold, gold chain

PÉ

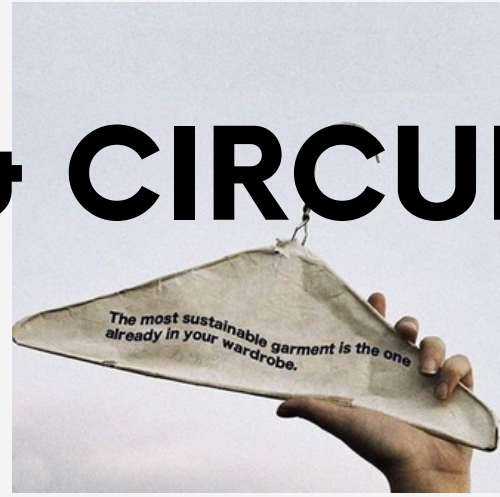conscious design for a better tomorrow
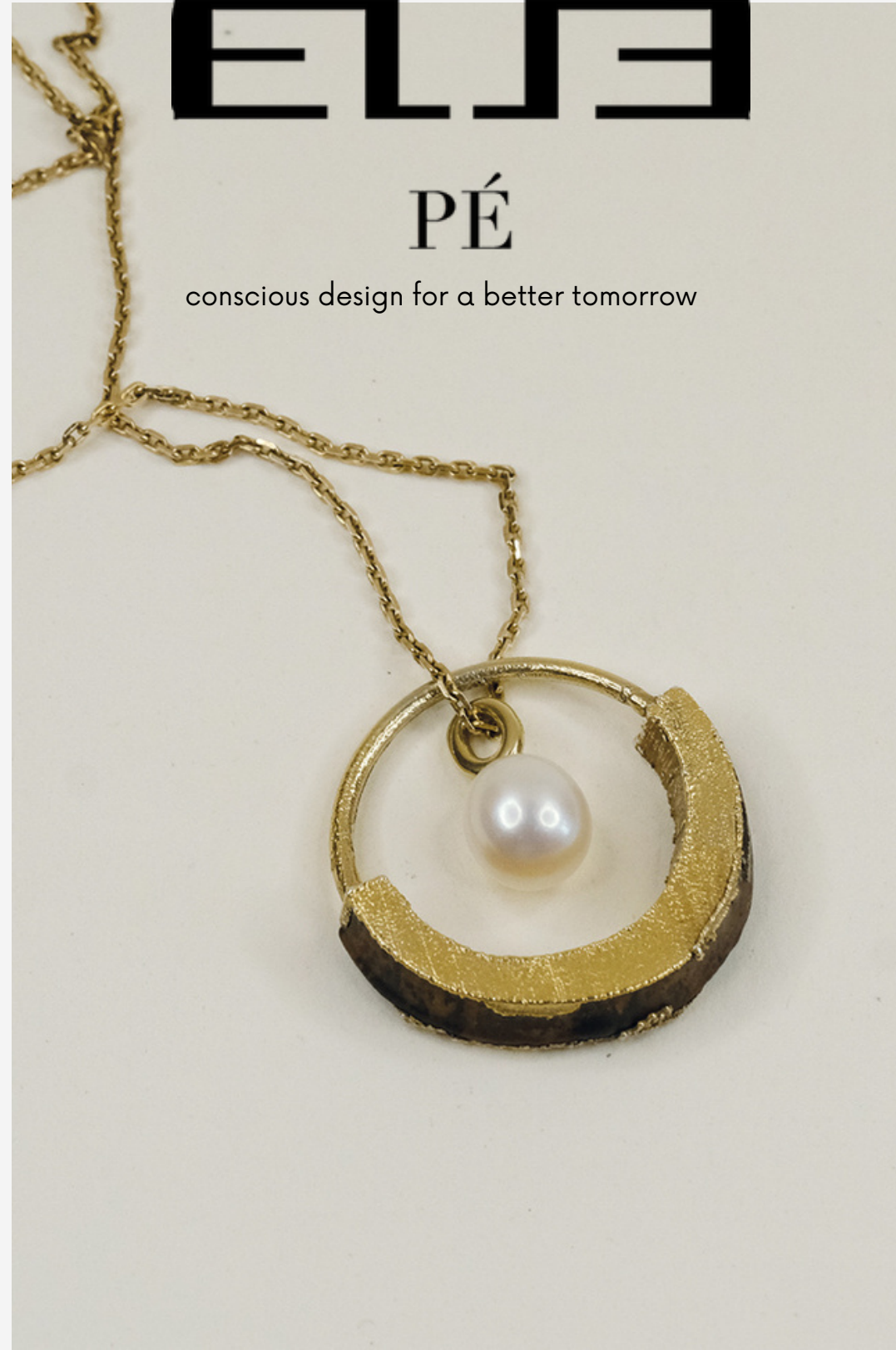
The aurora necklace
material: bamboo, real gold, real pearl, gold chain

The base material
material: bamboo,raw carved by hand

PRODUCT LIFECYCLE & CIRCULAIRITY CONCEPT

The most sustainable garment is the one already in your wardrobe.

RECYCLE

used garments come back to be made into something new

RAW MATERIALS

gives it back to our system

CUSTOMIZE YOUR OWN product in- THE OTHER LAYER availabe through APP

DESIGNED FOR CIRUCLAIRITY

DESIGNED FOR EVERY BODYSHAPE

PUTTING THE FOCUS ON HANDMADE AND CRAFTMANSHIP OF UNIQUE PIECES

GENDERFLUID STYLES

REPAIR AND CARE SHOP-SYSTEM

WEARING PHYSICAL & DIGITAL PRODUCT

COMMUNITY

things that the community does not want anymore -give it back to our system

**WEAR IT
CUSTOMIZE IT
RECYCLE IT &
BECOME PART OF
A FASHION REVOLUTION**

Textilewaste
Deadstock materials
Fashion indutries waste
existing styles from our own collection

GIVE BACK

DESIGNED AND BUILT TO LAST

DIGITAL EXTENSION OF PHYSICAL PRODUCT
"THE OTHER LAYER"
to inspire
to entertain
to keep the innovation fun
to show new ways of phygital
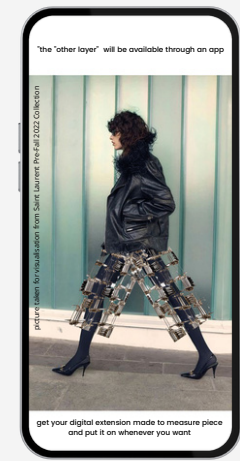
INITIATIVE

ITS COOL TO CARE

going into our initiative creating backpacks for the homeless on the street out of textile waste
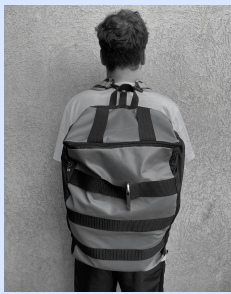
LESS   LESS   MORE CHARITY   MORE HUMANITY

TRANSPORTATION /PACKAGING
EFC certiefied paper packaging
use pick up in shop
and alternative delivery
systems within the city e.g. in
partner shops

INITIATIVE

ITS COOL TO CARE

Leftover fabrics from other suppliers / Textile waste from sorter

PRODUCE BACKPACK OUT OF THIS TEXTILE WASTE

**CONSUMERS BUY IT
WE GIFT IT
WE RECYCLE IT &
YOU BECOME PART OF
A CIRCULAIR REVOLUTION**

LEFTOVER WILL BE GIVEN BACK TO OUR MATERIAL LIBRARY

for each item sold – one backpack will be given to someone in need

LESS   LESS   MORE CHARITY   MORE HUMANITY

CO₂

PROBLEMS WE TACKLE

ENVIRONMENTAL IMPACT

- TACKLING EXCESSIVE WASTE AND ENVIRONMENTAL HARM IN FASHION
- UPCYCLING AND USING DEADSTOCK MATERIALS REDUCE RESOURCE DEMAND
- DIVERTING TEXTILES FROM LANDFILLS FOR A MORE ECO-FRIENDLY APPROACH

OVERPRODUCTION OVERCONSUMPTION

- ADDRESSING FASHION'S OVERPRODUCTION ISSUE
- PRODUCING GARMENTS ON-DEMAND TO REDUCE WASTE AND EXCESS INVENTORY MATERIAL BASE

LACK OF CUSTOMIZATION

- PROVIDING PERSONALIZED FASHION OPTIONS
- EMPOWERING CUSTOMERS TO TAILOR CLOTHING TO THEIR PREFERENCES

LACK OF TRANSPARENCY

- ENSURING TRANSPARENCY IN SUPPLY CHAINS AND PRODUCTION
- BUILDING TRUST AND ACCOUNTABILITY WITH CUSTOMERS
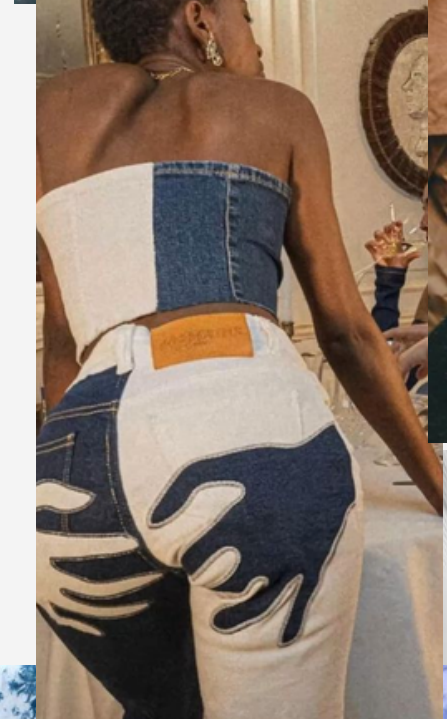
LIMITED SUSTAINABILITY AWARENESS

- RAISING AWARENESS OF SUSTAINABLE FASHION PRACTICES
- EDUCATING CONSUMERS ON ECO-CONSCIOUS CHOICES IN FASHION

CONSUMER EMPOWERMENT

- EMPOWERING CONSUMERS TO MAKE ETHICAL FASHION CHOICES
- PROVIDING EDUCATION AND SUSTAINABLE OPTIONS

IMPACT ON COMMUNITIES / SUSTAINABILITY MOVEMENT

- POSITIVELY IMPACTING FASHION SUPPLY CHAIN COMMUNITIES
- SUPPORTING WORKERS AND ARTISANS WITH RESPONSIBLE PRACTICES
- CONTRIBUTING TO THE FASHION INDUSTRY'S SUSTAINABILITY MOVEMENT
- ENCOURAGING ECO-FRIENDLY PRACTICES AND ETHICAL FASHION CHOICES

ENGAGEMENT CONNECTION

- FOSTERING CONSUMER ENGAGEMENT THROUGH PHYGITAL EXPERIENCES
- STRENGTHENING THE BRAND'S CONNECTION WITH THE AUDIENCE

Towards a strategic research agenda for the Green Deal transition including Zero Pollution

Towards a strategic research agenda for the Green Deal transition including Zero Pollution

Zero Pollution Stakeholder Platform, 9 November 2023

ENV.A3 Green Knowledge, Research Hub, LIFE

Outline of the R&I session

1. Horizon Europe and the policy context (10 min)

2. EU-funded research on Zero Pollution (5 min)

3. Interactive session on R&I needs to support ZPAP (50 min)

4. Conclusion (5 min)

European Commission

Horizon Europe and the policy context

European Commission

Horizon Europe and the policy context

- Horizon is contributing to the implementation of the ZPAP and its initiatives across various Horizon Europe clusters, partnerships, missions, etc.

- R&I has been addressing *pollution in air, water, soil; pollution in seas and oceans; noise and light pollution; hazardous chemicals; (micro-)plastic pollution; nutrient pollution; environmental impacts of food systems; links between pollution and human health; clean transport; pollution in cities; water-energy-food nexus, etc.*

- Mandatory 'Do No Significant Harm principle' (pollution prevention & control)

European Commission

Cluster 6: food, bio-economy, natural resources, agriculture and environment

Other clusters:

Seven destinations (D1-D7)

D1: Biodiversity and ecosystem services

D2: Fair, healthy and environmentally-friendly food systems

D3: Circular economy and bioeconomy sectors

D4: Clean environment and zero pollution

D5: Land, oceans and water for climate action

D6: Resilient, inclusive, healthy and green rural, coastal and urban communities
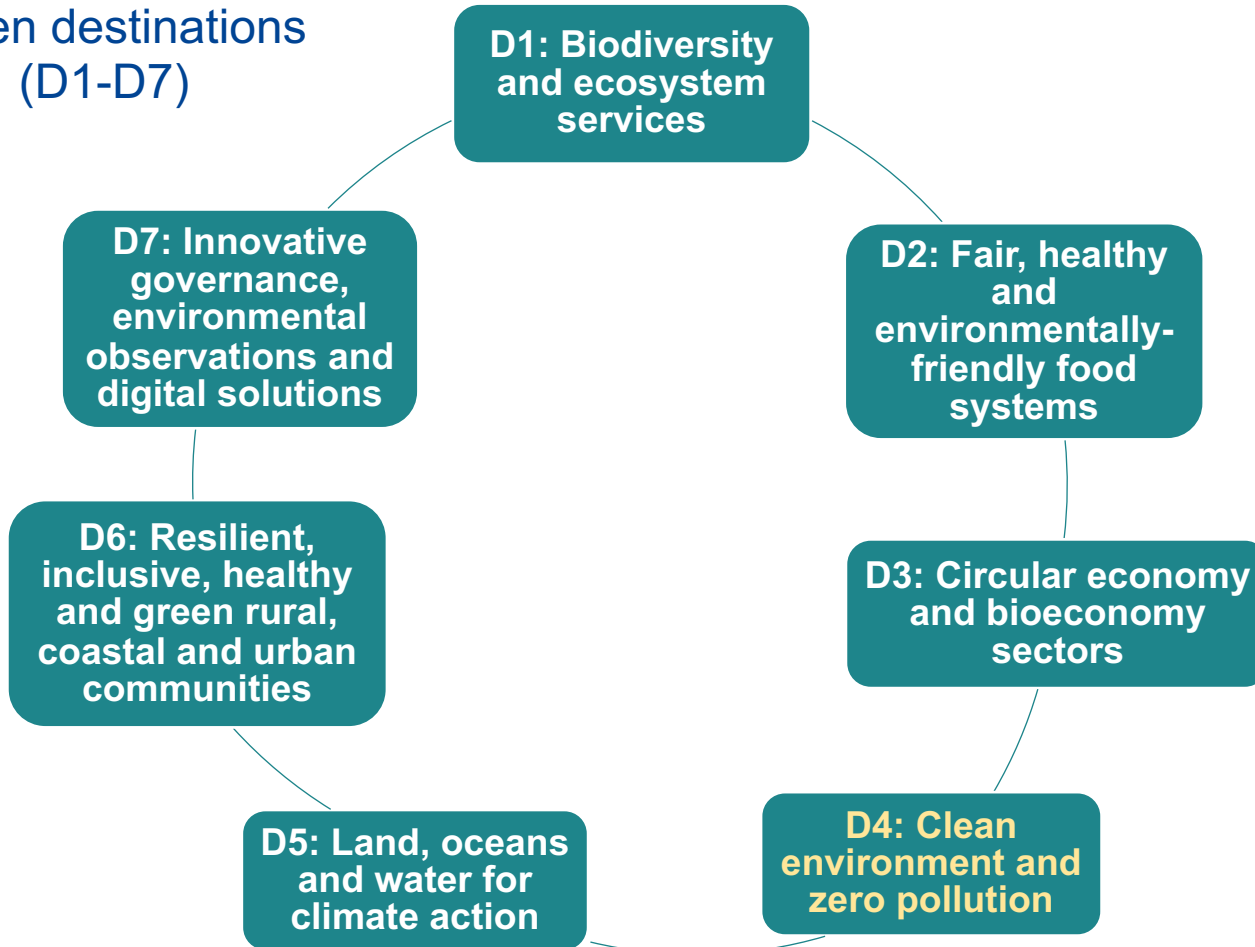
D7: Innovative governance, environmental observations and digital solutions

1. Health
(environment and social health determinants, rare diseases, non-communicable diseases, etc.)

2. Culture
(democracy, cultural heritage, soc&eco transformation, etc.)

3. Security
(disaster-resilience, protection, cybersecurity, etc.)

4. Digital, industry, space, defence
(manufacturing technologies, advanced materials, AI, circular industries, low carbon and clean industries)

5. Climate, energy, mobility
(climate science and solutions, energy supply, energy grids, energy storage, buildings in energy transition, cities, clean, safe and accessible transport, etc.)

Relevant Partnerships for Zero Pollution - examples

Water Security for the planet

Scientific research in freshwater

Sustainable Blue Economy

R&I agendas of the sea basins (Mediterranean, Black Sea, Baltic and North Sea) and the Atlantic Ocean

PARC

Next-generation chemical risk assessment to protect human health and the environment

Five EU Missions - all relevant to Zero Pollution
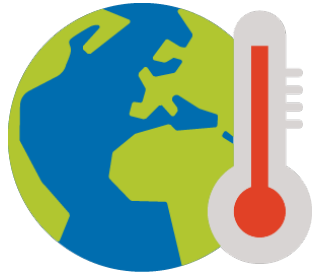
Adaptation to climate change

Cancer

Restore our oceans and waters

Climate-neutral & smart cities

Soil Deal for Europe

European Commission

Horizon Europe: towards the second Strategic Plan

Poll results – 2nd ZPSP meeting 2022

What type of information/ opportunity would be useful for your organization to receive via the ZPSP in relation to R&I activities?
(1/2)

`0` `3` `5`

Information on relevant new R&I calls under Horizon Europe

49 %

Information on relevant R&I results under H2020/Horizon Europe

69 %

Details of info-days for Horizon Europe Clusters and Missions

20 %

An opportunity to identify relevant R&I gaps or needs related to the zero pollution ambition

74 %

Other types of information not listed above.

3 %

European Commission

EU-funded research on Zero Pollution

European Commission

EU-funded research on Zero Pollution
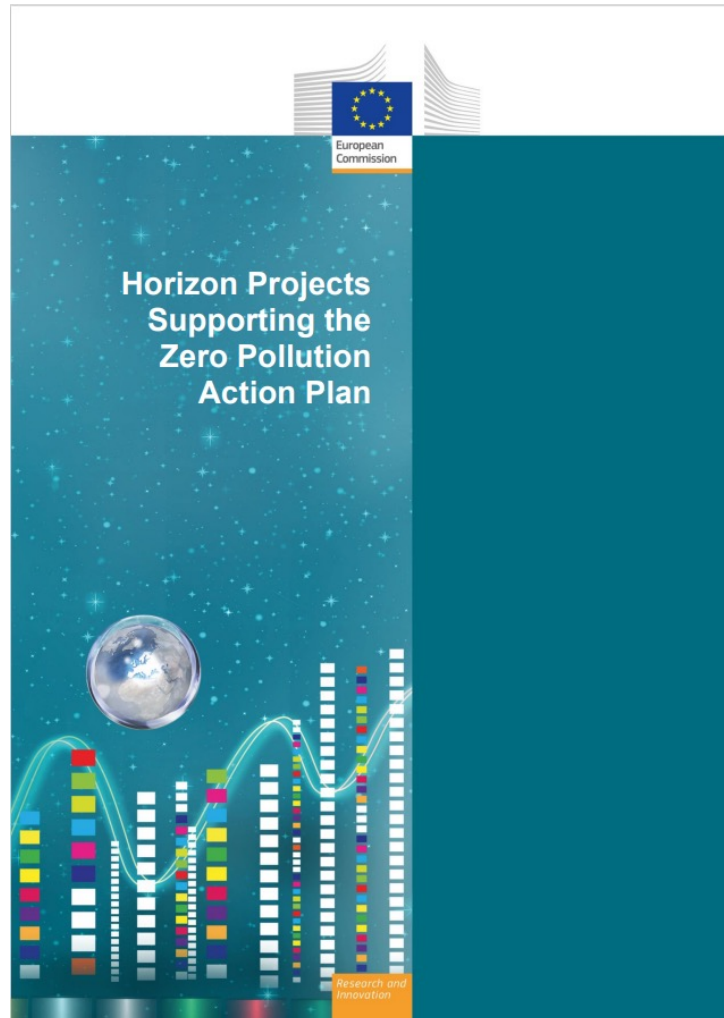
- Selected H2020 projects contributing to 9 flagships of the ZPAP

- Projects and partnerships in the pipeline

- Research findings summarised for a wider audience

Report (2022) [Horizon projects supporting the zero pollution action plan - Publications Office of the EU (europa.eu)](#)

EU-funded research on Zero Pollution - examples

Air - "IDEAL" -> cluster of 7 projects

- **Title:** Indoor Air Quality Health

- **Type of action**: Research and Innovation Actions

- **Topic:** Indoor air quality and health

Start date
2022/2023

End date
2026/2027

Funded under
Health

EU contribution
€ 52 198 209,76

Total cost
€ 52 226 118,26

More info: Cordis, website

Water - "ZP4Water" -> cluster of 7 projects

- **Title**: Cluster Zero Pollution for Water

- **Type of action**: Research and Innovation Actions

- **Topic:** Preventing groundwater contamination / Securing drinking water quality by protecting water sources against pollution

Start date
2022

End date
2025/2026

Funded under
Food, Bioeconomy Natural Resources, Agriculture and Environment

EU contribution
€ 27 299 645,48

Total cost
€ 27 447 579,17

More info: Cordis

European Commission

EU-funded research on Zero Pollution - examples

Soil - ISLANDR

- **Title:** Information-based Strategies for LAND Remediation

- **Type of action**: Research and Innovation Action

- **Topic:** Remediation strategies, methods and financial models for decontamination and reuse of land in urban and rural areas

Start date	End date
2023	2026

Funded under
Food, Bioeconomy Natural Resources, Agriculture and Environment (Soil Mission)

EU contribution	Total cost
€ 5 804 677,50	€ 5 804 677,50
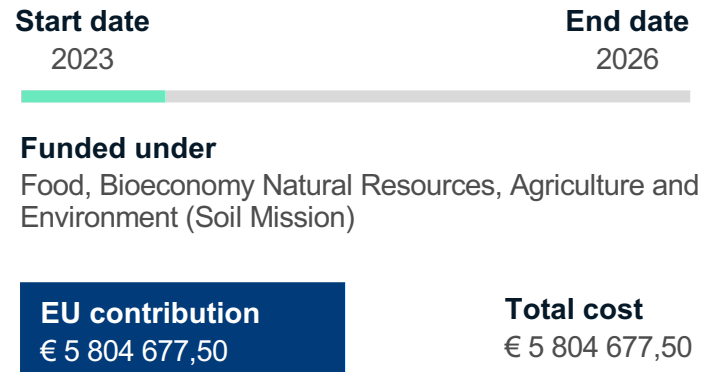
More info: Cordis

Health – "EHEN" -> cluster of 9 projects

- **Title:** European Human Exposome Network

- **Type of action**: Research and Innovation Actions

- **Topic:** The Human Exposome Project: a toolbox for assessing and addressing the impact of environment on health

Start date	End date
2020	2024

Funded under
SOCIETAL CHALLENGES - Health, demographic change and well-being (H2020)

EU contribution	Total cost
€ 105 846 174,50	€ 105 849 675,10

More info: Cordis, Website

European Commission

Interactive session on R&I needs to support ZPAP

European Commission

Zero Pollution R&I needs

Knowledge gaps/ needs for 2025-2027

- Clean and healthy air / water/ soil

- Environmental pollution within planetary boundaries:
  - Chemicals (see *Strategic R&I Plan for Chemicals and Materials*); nutrients; plastics & micro-plastics; noise; etc.

- Clean production & consumption:
  - Industry; agriculture and food systems; pollution footprint of products & materials across value chains

- Other
  - Clean urban environments; digital solutions; etc.

Gap analysis

work in progress

circulated on 26/10
for discussion today

Clean and healthy air
Improved AQ monitoring and modelling, including dynamic / real-time and the use of AI
Risks of pollutants of emerging concern, including ultrafine particles, black/elemental carbon, sand, PFAS, nanomaterials
Specific emission sources of a cross-silo nature
Risks and identification/detection of waste burning for domestic heating
Energy poverty and related risks for air pollution due to waste and coal/biomass combustion
Emissions from shipping cargoes e.g., methane leakage, fugitive VOCs from tank degassing
Air pollution due to wear and tear in context of e-mobility (road surface/brake emissions from electric vehicles)
Clean and healthy water
Increased water resilience in urban, sub-urban and rural settlements
Preventing spread of antimicrobial resistance through water pathway
Health effects of human exposure to low levels of pharmaceutical via the environment, including combined effects and vulnerable sub-populations
Scale and purpose of existing Managed Aquifer Recharge projects in the EU
Restoration needs for offshore and deep water ecosystems
Ensure cost-effective management of (micro)-pollutants in waste water
Clean and healthy soil (NB shorter list as many needs addressed in Mission Soil, the Biodiversity R&I Roadmap)
Diffuse soil contaminants: monitoring methods, properties and impact on public health
Water storage capacity of natural stock-places in aquifers or soils, especially in flood plains with intensive agriculture and urbanisation
Environmental pollution within planetary boundaries
Transition to non-animal science, addressing use of animals in basic and applied research
Nutrient pollution measures: monitoring, ex-ante estimation and ex-post evaluation
Safe recycling of sewage sludge and other biowaste
Marine eutrophication mitigation: innovative methods including nature-based solutions
Plastic/microplastic pollution measures for soil, freshwater and marine waters
Noise: new methods and tools to automatically characterize noise exposure
Noise-related health impacts, including combined impacts of road traffic and air pollution in urban areas
Hazardous substances of concerns in industrial releases: identification of the sources, quantification of the releases and risk assessment for environment, including human health.
Hazardous substances (including asbestos): health risks related to exposure in occupational environments
Clean production & consumption (NB shorter list as many needs addressed in the Circular Economy R&I Roadmap)
Cumulative pollution impacts of agriculture and aquaculture practices (comparative)
Industrial risks and disasters: development of innovative strategies with local populations
Pollution linked to raw materials extraction / production in third countries for EU imports
Other
Urban exposure: complexity of and relationships between different pollution types, and related health impacts
Develop digital solutions for zero pollution as well as local digital twins/ virtual models

European Commission

Slido

Password: **#1473480**

QR code

Join at
slido.com

European Commission

Thematic priorities (25 min)

- Would you have any feedback on the needs/gaps listed in the summary roadmap? Are there further relevant R&I needs not yet sufficiently addressed in the R&I landscape at EU level?

- In your view which should be the main priorities supporting ZPAP objectives?

Horizon Europe tools (5-10 min)

- Which types of research actions (fundamental research, development of technologies, demonstration, coordination & support, etc.) are in your view most suitable to pursue different long-term objectives?

Horizon Europe cross-cutting issues (5-10 min)

- In which way should cross-cutting issues and approaches be featured in forthcoming Horizon Europe work programmes – such as:
  - international cooperation
  - citizen science
  - gender dimension
  - social sciences and humanities (SSH)
  - social innovation
  - FAIR* data,
  - Do-No-Significant-Harm principle?

* FAIR data are data which meet principles of **f**indability, **a**ccessibility, **i**nteroperability, and **r**eusability.

European Commission

Thank you!

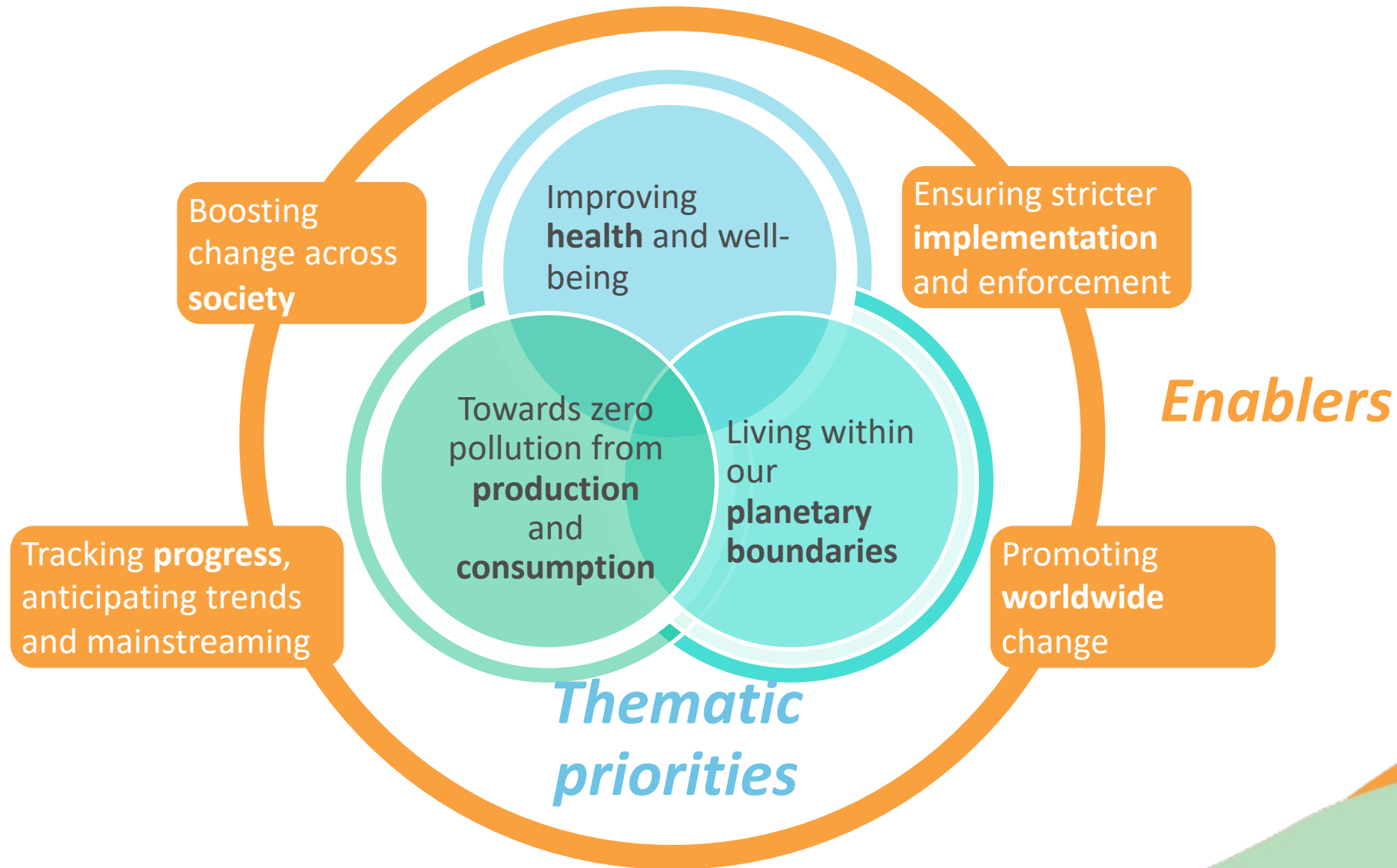Any further written input is welcome via ENV-RESEARCH@ec.europa.eu until 17 November.
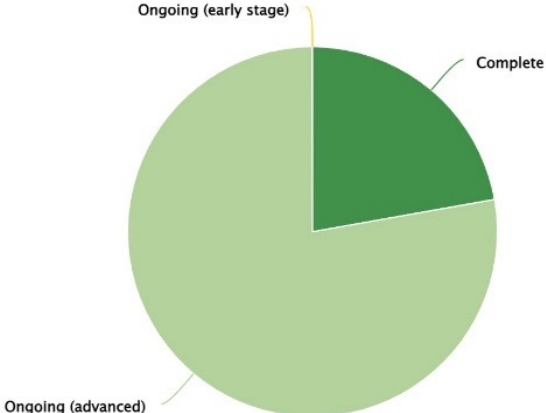
European Commission

Information Points

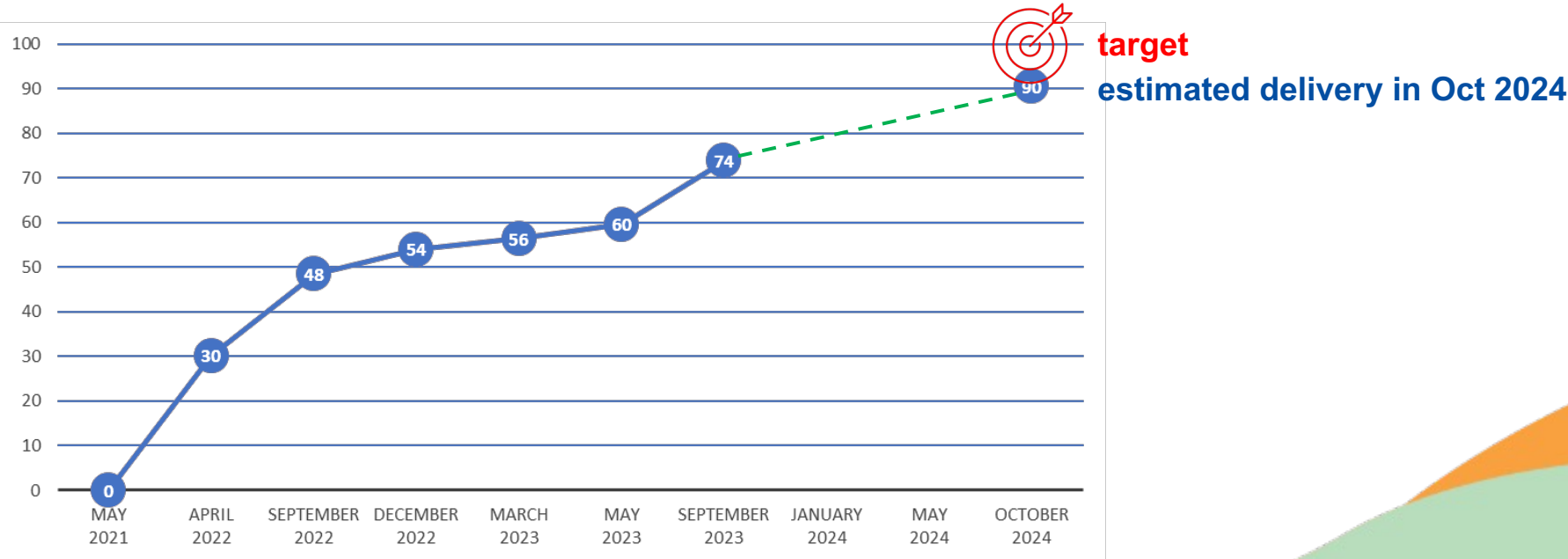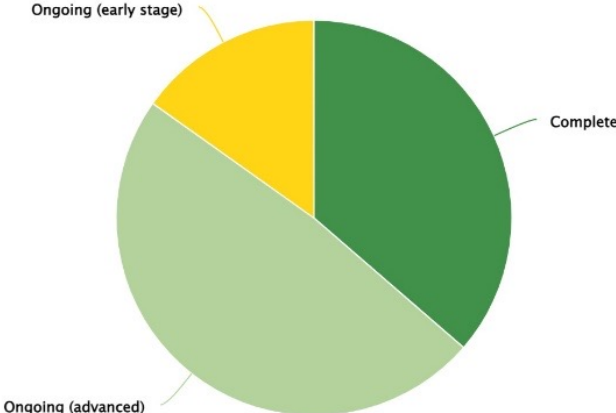# Implementation of the Zero Pollution Action Plan (ZPAP)

ZPAP: implementation progress

Progress of flagships

Progress of actions

target
estimated delivery in Oct 2024

Zero Pollution - key legislative actions

ZPAP actions – proposals until July 2022

- Revision of the **Industrial Emissions Directive** and **Industrial Emissions Register** Regulation (April 2022)
- Sustainable Product Initiative – Revision of **Ecodesign Directive** (April 2022)
- Revision of the **Environmental Crime Directive** (Dec 2021)
- **Fit455 package** and **RePowerEU** packages (2021/ 2022) (e.g. **Renewable Energies** and **Energy Efficiency** Directives

ZPAP package October 2022

- Revision of **Ambient Air Quality Directive**
- Revision of the **Urban Wastewater Treatment Directive**
- Revision of **water pollutants list** (Environmental Quality Standards and Groundwater Directives)

Other relevant Green Deal actions (selection)

- Revision of the Waste Shipment Regulation (Nov 2021)
- Revision of the **Sustainable Use of Pesticides** Regulation (June 2022)
- New **Nature Restoration Law** (June 2022)
- New emission limit values for motor vehicles (**EURO7**) (Nov 2022)

ZPAP actions 2023/2024

- Implementation Report of **Environmental Noise Directive** (delivered)
- Revision of the **Mercury Regulation** (delivered)
- Evaluation of the **Environmental Liability Directive** (ongoing)
- Evaluation of the **Marine Strategy Framework Directive** (ongoing)
- Evaluation of the **Bathing Water Directive** (ongoing)

Implementation progress – Other actions

- More than **50 other actions listed in the Zero Pollution Action Plan** Communication which were announced as **part of other Green Deal initiatives** but are **highly relevant for zero pollution**

- **Many Green Deal policies contribute**
  - **Fitfor55:** most several climate and energy actions
  - **Renovation Wave:** Asbestos
  - **Smart and Sustainable Mobility Strategy:** Emission Control Areas for shipping and Inland Navigation Action Plan
  - **Health and the Beating Cancer Action Plan**
  - **Agriculture:** CAP Strategic Plans, Vision for Rural Areas
  - **Horizon Europe** (e.g. Horizon Missions, Partnerships etc.)
  - **Pharmaceutical Strategy**
  - **International:** many actions
  - **Others** (financial, agriculture, digital, education, consumer protection,….)

- **Other environment policies (biodiversity, circular economy & chemicals) are closely interlinked and work in close synergy**

- **Most of them are delivered by the Commission!**

Biodiversity & Farm to Fork Strategies
- **Global Biodiversity Framework**
- Proposal for a **Nature Restoration Law**
- Revision of the **Sustainable Use of Pesticides Regulation**
- **Soil Strategy**

Circular Economy Action Plan
- Sustainable Product Policy
- Revision of **Ecodesign for Sustainable Products Regulation**
- Proposal on **Green Claims**
- Proposals to reduce **microplastics** pollution

Chemicals Strategy for Sustainability
- Revision of **REACH, CLP** and **related proposals**
- **Safe and Sustainable by Design**
- Revision of the **POPs Regulation**
- Proposals to reduce **PFAS** pollution

Implementation of the Zero Pollution Action Plan (ZPAP): stocktaking and next mandate

Three steps

2023: Evaluation of the Zero Pollution stakeholder activities – consultants will request input via questionnaire

2024: Update of the Zero Pollution Monitoring and Outlook

2025: Review of the Zero Pollution Action Plan

Recent and upcoming meetings

- **7 November 2023: Zero Pollution Talk on the Opinion of the Committee of the Regions on the proposal for a Soil Monitoring Law**

- **today: 5th Meeting of the Zero Pollution Stakeholder Platform**

- **24/25 January 2024: Stakeholder Workshop on the preparation of the second edition** of the **Zero Pollution Outlook and Monitoring** report (2024)

1ˢᵗ Zero Pollution Monitoring & Outlook

Commission Report (COM(2022) 674)

The zero pollution action plan sets the zero pollution targets for 2030

EEA Monitoring Assessment 2022

The zero pollution monitoring assessment 2022 assesses the past trends and the latest monitoring data available

JRC Outlook 2022

The Zero Pollution Outlook 2022 provides modelling and foresight, assessing the expected pollution-reduction benefits of EU policies

https://environment.ec.europa.eu/strategy/zero-pollution-action-plan/zero-pollution-targets_en

2nd Zero Pollution Monitoring & Outlook

- **Link to other monitoring programmes**
  - 8th EAP – headline indicators published
  - Chemical Strategy – new indicators
  - Global Biodiversity Framework – alignment of indicators

- **New / update data**
  - Marine litter
  - New water and noise data
  - Pesticides outlook

- **Showcases earth observation including Copernicus**

2nd Zero Pollution Monitoring & Outlook

- **Better visualisation and more consolidated summary report**

- **Feedback and input in the preparation – Stakeholder Workshop January 2024**

- **Report will provide evidence for future policy making**

- **Timelines still to be decided**

Conclusion and next steps

Co-chairs

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