



**HE Launch event**  
**Panel: Ecological and social transitions**  
***Istanbul, 21-22 March 2022***

**Dr. Bernd Biervert**

**Head of Unit, DG RTD C5, European Commission**

#EUGreenDeal

Research and  
Innovation

Mobilising Research & Fostering Innovation

Transforming the EU's economy for a sustainable future

Mainstreaming sustainability in all EU policies

Designing a set of deeply transformative policies

The European Green Deal

And leaving no one behind

Leave no one behind (Just Transition)

Financing the transition

The EU as a global leader

A European Climate Pact

Designing a set of  
deeply  
transformative  
policies



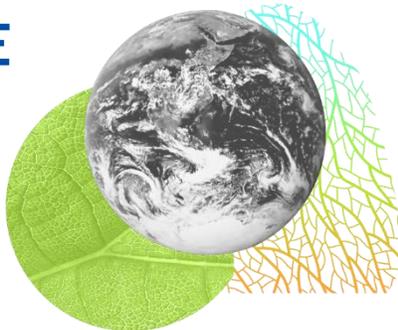
Research and Innovation

# CLIMATE ACTION

- ▶ **European Climate Law** enshrines the **2030 target of at least 55% reduction in greenhouse gas emissions** and the **2050 climate neutrality** objective into binding legislation across all Member States
- ▶ The **“Fit for 55” package** is a set of **interconnected legislative proposals** to **deliver on the EU’s 2030 climate target**, taking a whole of economy approach for a **socially fair, competitive and green transition**
- ▶ European **Climate Pact** will engage people, communities and organisations in climate action and building a greener Europe
- ▶ **EU Strategy on Climate Adaptation** aims to prepare for the **unavoidable impacts of climate change** and make the EU **climate resilient**

# DELIVERING ON THE 'FIT FOR 55' COMMITMENT

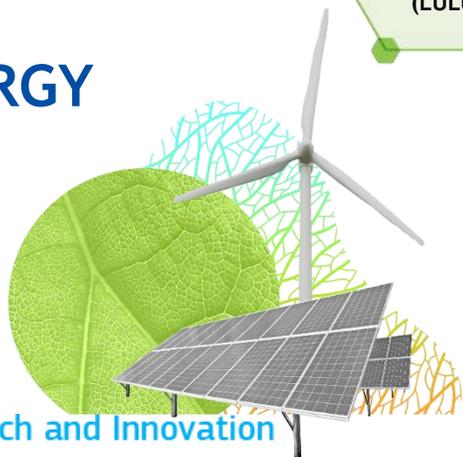
## CLIMATE



## TRANSPORT



## ENERGY



## TAXATION AND TRADE



Research and Innovation

# CLEAN ENERGY TRANSITION

- ▶ **Decarbonising the EU's energy system is critical** to achieving our targets
- ▶ Major strategies on **Energy System Integration, Hydrogen, Methane, Offshore Renewable Energy** and the **European Battery Alliance**
- ▶ Plan to prioritise **energy efficiency**, develop a power sector based largely on **renewable sources**, have a **secure and affordable EU energy supply**, and a **fully integrated, interconnected and digitalised EU energy market**
- ▶ Aiming for **40% share for renewable energy** and **36-39% improvement in energy efficiency** by 2030

# | CURRENT CONTEXT - REPowerEU

- ▶ Recent **high and volatile energy prices**, compounded by Russia's invasion of Ukraine, has put the spotlight on the **EU's energy security**
- ▶ A **rapid clean energy transition** is required, simultaneously boosting the EU's **decarbonisation efforts** while also strengthening the EU's **geopolitical situation**
- ▶ **REPowerEU**: Joint European action for more affordable, secure and sustainable energy – short and medium-term actions
- ▶ **Urgent action on prices**: possible **price regulations**, Temporary Framework for **State Aid** measures, guidance on **temporary tax measures** on windfall profits, and market actions to improve **market design**
- ▶ **Refilling gas storage for next winter**: proposal on **minimum gas storage**, **coordinated gas refilling operations**, investigation into behavior of operators

# REPowerEU AND CUTTING DEPENDENCE ON GAS

- ▶ **Reduce dependence on fossil fuels:** More rooftop solar panels, heat pumps and energy savings in buildings and homes
- ▶ **Diversifying gas supplies:** move away from Russian gas by working with international partners and investing in the necessary infrastructure
- ▶ **Speed up roll-out of renewables:** improvements to grid infrastructure and faster permitting process
- ▶ **Decarbonising industry:** accelerate the switch to electrification and renewable hydrogen
- ▶ **Targeted actions:** Hydrogen Accelerator and doubling EU ambition for biomethane

# INDUSTRY & CIRCULAR ECONOMY AND BUILT ENVIRONMENT

- ▶ **Industrial Strategy** aims to help EU industry lead the **twin green and digital transitions** for a **globally competitive and resilient EU**, in areas such as low carbon industries, digital platforms and raw materials
- ▶ **Circular Economy Action Plan** aims to change the **ways we consume and produce** across the entire product lifecycle, in key sectors like electronics and ICT, textiles, plastics, food and packaging, and waste
- ▶ **Renovation Wave** aims to double renovation rates by 2030, creating 160,000 green jobs, reducing energy poverty and improving quality of life
- ▶ **New European Bauhaus** aims to make the Green Deal tangible for citizens, based on **core values of sustainability, inclusion, aesthetics**

# ECOSYSTEMS & BIODIVERSITY AND 'FARM TO FORK'

- ▶ The **EU Biodiversity Strategy for 2030** aims to **establish protected areas (30% of land and 30% of sea in Europe)**, increase **afforestation**, increase **organic farming**, halt and reverse decline of **pollinators**, reduce harmful pesticides
- ▶ The **'Farm to Fork' Strategy** will tackle chemical and hazardous **pesticide use**, **excess nutrients** (e.g. in soil), and **antimicrobial resistance**. It will boost **organic farming**, develop a **sustainable food labelling framework**, fight **food waste** and **empower consumers**

# | SUSTAINABLE MOBILITY & ZERO POLLUTION

- ▶ **Sustainable and Smart Mobility Strategy** lays the foundation for how the EU transport system can **cut emissions by 90% by 2050**
- ▶ Targets for 2030 include **100 climate neutral European cities**, at least **30 million zero-emission cars** on European roads, **doubling high-speed rail** across Europe, and **automated mobility** deployed at large scale. Targets for 2030 and 2035 include measures aimed at making **zero-emission marine vessels and large aircraft** market ready.
- ▶ **Chemicals Strategy for Sustainability** and **Zero Pollution Action Plan** aim to ensure better protection of **human health** and the **environment**, boost innovation, and prevent and reduce **air, water, soil** pollution.

# JUST TRANSITION & GLOBAL DIMENSION

- ▶ The Green Deal will not be a success unless it is a **Just Transition, leaving no one behind** and showing solidarity
- ▶ The **Just Transition Mechanism** provides financial support and protects the most vulnerable transition with measures to support **upskilling and reskilling**, improve **access to clean, affordable and secure energy**, and invest in **public and sustainable transport**, etc.
- ▶ The **EU is a global leader on climate change**, working to uphold the aims of the **Paris Agreement**, strengthening international partnerships, setting standards, and advocating for greater climate action worldwide

# FINANCE & INVESTMENT

- ▶ The cost of inaction on climate change far outweighs the costs of action.
- ▶ The Green Deal, as the EU's **new growth strategy**, is the **motor and compass of the recovery** from COVID-19.
- ▶ Between the **Multiannual Financial Framework (2021-2027)** and **NextGenerationEU**, EU funding amounts to **€1.8 trillion**, at least 30% of which will go towards climate action.
- ▶ A minimum of 37% of the new **Recovery and Resilience Facility**, worth **€672.5 billion** divided between grants and loans, will be for climate investments and reforms.



**Research &  
Innovation powering  
the Green Deal**

# MOBILISING RESEARCH & FOSTERING INNOVATION

- ▶ At least **35% of Horizon Europe funding** (c. €33 billion) dedicated to climate action
- ▶ Horizon 2020 **Green Deal Call of €1 billion**
- ▶ Four '**Green Deal Missions**' (climate adaptation, oceans, cities and soil)
- ▶ **European Partnerships** with industry and Member States
- ▶ **European Institute of Innovation and Technology** support to young researchers and innovators
- ▶ **European Innovation Council** focused on radically new, breakthrough products, services and processes
- ▶ **Data and digital infrastructure** in support of the ecological transition

# THE ROLE OF R&I POLICY IN THE EGD

- ▶ DG Research and Innovation is **actively engaged** across **all European Green Deal work streams**
- ▶ As a **key enabler** of the various transitions called for by the European Green Deal, research and innovation can **drive, navigate and accelerate the twin green and digital transitions**
- ▶ Research and innovation must **develop, demonstrate and deploy solutions** widely and at scale
- ▶ Research and innovation is a **policy of opportunity** and should **play a key role** in helping Europe achieve **climate neutrality** by 2050

# | EUROPEAN GREEN DEAL CALL

- ▶ Launched in September 2020, the **Green Deal Call under Horizon 2020** is worth **€1 billion** and is a direct contribution to the **Green Deal** and the **Recovery Plan**
- ▶ Major **cross-cutting** call to provide **innovative solutions**, demonstrate **tangible results** and instil confidence in citizens that **action is underway**
- ▶ The Call addressed the major priorities of the Green Deal, with eight thematic areas and two horizontal areas – ‘**strengthening knowledge**’ and ‘**empowering citizens**’ offering a longer-term perspective

# HORIZON EUROPE

# EURATOM

## SPECIFIC PROGRAMME: EUROPEAN DEFENCE FUND

*Exclusive focus on defence research & development*

Research actions

Development actions

## SPECIFIC PROGRAMME IMPLEMENTING HORIZON EUROPE & EIT\*

*Exclusive focus on civil applications*



### Pillar I EXCELLENT SCIENCE

European Research Council

Marie Skłodowska-Curie

Research Infrastructures



### Pillar II GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS

Clusters

- Health
- Culture, Creativity & Inclusive Society
- Civil Security for Society
- Digital, Industry & Space
- Climate, Energy & Mobility
- Food, Bioeconomy, Natural Resources, Agriculture & Environment

Joint Research Centre



### Pillar III INNOVATIVE EUROPE

European Innovation Council

European Innovation Ecosystems

European Institute of Innovation & Technology\*

## WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA

Widening participation & spreading excellence

Reforming & Enhancing the European R&I system

Fusion

Fission

Joint Research Center

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

# Cluster 6 expected impacts

Impact 1 Climate neutrality and adaptation to climate change

Impact 2 Preservation and restoration of biodiversity and ecosystems

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

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

Impact 5 Balanced development of rural, coastal and urban areas

Impact 6 Innovative governance models enabling sustainability, environmental observation



## Intervention Areas

Environmental Observation

Biodiversity and Natural Resources

Agriculture, Forestry and Rural Areas

Seas, Oceans and Inland Waters

Food Systems

Bio-based Innovation Systems in the EU Bioeconomy

Circular Systems

# Overview of 49 candidate European Partnerships

## HORIZON EUROPE PILLAR II - Global challenges & European industrial competitiveness

CLUSTER 1: Health	CLUSTER 4: Digital, Industry & Space	CLUSTER 5: Climate, Energy & Mobility	CLUSTER 6: Food, Bioeconomy, Agriculture, ...
Innovative Health Initiative	Key Digital Technologies	Clean Hydrogen	Circular Bio-based Europe
Global Health Partnership	Smart Networks & Services	Clean Aviation	Rescuing Biodiversity to Safeguard Life on Earth
Transformation of health systems	High Performance Computing	Single European Sky ATM Research 3	Climate Neutral, Sustainable & Productive Blue Economy
Chemicals risk assessment	European Metrology (Art. 185)	Europe's Rail	Water4All
ERA for Health	AI-Data-Robotics	Connected and Automated Mobility (CCAM)	Animal Health & Welfare*
Rare diseases*	Photonics	Batteries	Accelerating Farming Systems Transitions*
One-Health Anti Microbial Resistance*	Made in Europe	Zero-emission waterborne transport	Agriculture of Data*
Personalised Medicine*	Clean steel - low-carbon steelmaking	Zero-emission road transport	Safe & Sustainable Food System*
Pandemic Preparedness* <i>Co-funded or co-programmed</i>	Processes4Planet	Built4People	
	Global competitive space systems**	Clean Energy Transition	
		Driving Urban Transitions	

## PILLAR III - Innovative Europe

EIT (KNOWLEDGE & INNOVATION COMMUNITIES)	SUPPORT TO INNOVATION ECOSYSTEMS
InnoEnergy	Innovative SMEs
Climate	
Digital	
Food	
Health	
Raw Materials	
Manufacturing	
Urban Mobility	
Cultural and Creative Industries	

## CROSS-PILLARS II & III

European Open Science Cloud
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- Institutionalised Partnerships (Art 185/7)
- Institutionalised Partnerships / EIT KICs
- Co-Programmed
- Co-Funded

\* Calls with opening dates in 2023-24

\*\* Calls with opening dates not before 2022

# HORIZON EUROPE GREEN DEAL MISSIONS



Adaptation to climate change,  
including societal transformation



Climate-neutral and  
smart cities

Soil health and food



Healthy oceans, seas,  
coastal and inland waters



# What is the New European Bauhaus?

- The New European Bauhaus translates the **European Green Deal** into a tangible, positive experience in which all Europeans can participate and progress together.
- It inspires a movement to facilitate and steer the transformation of our societies along **three inseparable values**:
  - **Sustainability**, from climate goals, to circularity, zero pollution, and biodiversity
  - **Inclusion**, from valorising diversity, to securing accessibility and affordability
  - **Aesthetics**, quality of experience and style, beyond functionality
- The initiative's **approach is multi-level** from global to local, **participatory** and **transdisciplinary**.

# Overview of research & innovation contribution

- **Horizon Europe is a key instrument to support the New European Bauhaus:**
  - **Work Programme 2021-2022: Clusters 2, 4, 5 and 6** contain actions that directly and indirectly contribute to the NEB
  - **Future Work Programmes will look to build on the first contributions** and better embed NEB principles and values in Horizon Europe
  - **EU Missions** share many policy and implementation characteristics with the NEB
  - **€25 million cross-mission call for lighthouse demonstrators**
- **Major R&I commitments in the NEB Communication:**
  - Organise a **high-level workshop on ‘research and innovation for the NEB’**, bringing together leading experts to provide a forward-looking research and innovation agenda supporting the NEB (30 November, Brussels)
  - From 2022 onwards, **pursue further synergies** with the activities launched under the **EU Missions**



I THANK YOU

Contact: [bernd.biervert@ec.europa.eu](mailto:bernd.biervert@ec.europa.eu)

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