



# RESEARCH & INNOVATION TO DRIVE THE GREEN DEAL

December 2019

The **European Green Deal** is a major contribution for the health of our planet and our people – and for our economy. In order for Europe to become a climate-neutral continent by 2050, this will require decarbonisation at a speed at least six times faster than anything achieved globally so far. Research and innovation will play a central role in accelerating the necessary transitions, deploying and demonstrating solutions, and engaging citizens in social innovation. Research and innovation will help drive and navigate the long-term systemic changes required to create a cleaner, greener, fairer society.

## HORIZON EUROPE

plays a pivotal role in shaping, supporting and delivering on European policy priorities, including the European Green Deal.

> **35%**

of the expenditure from actions under the Horizon Europe Programme will contribute to climate objectives

## The Horizon Europe Missions



Healthy Oceans, Seas,  
Coastal and Inland Waters



Climate Neutral and  
Smart Cities



Soil Health  
and Food



Adaptation to Climate  
Change and Societal  
Transformation



Cancer

## The Horizon Europe Missions will

- directly support the European Green Deal
- catalyse action
- deliver impact
- provide and demonstrate flagship solutions
- produce European public goods
- capture the imagination of citizens
- inspire confidence in the transformations ahead

In 2020, the Commission will launch a new **Horizon 2020 Climate Action call in support of the European Green Deal**. It will strengthen the contribution of Research and Innovation to climate objectives and will show citizens that the new European Commission is taking urgent action.

There will be a new wave of **European research and innovation partnerships** under Horizon Europe to drive the huge environmental, societal and economic transformations called for the European Green Deal.

The Commission will work closely with industry and the Member States to **support partnerships in critical areas such as energy, transport, biodiversity, health, food and circularity**.

## Selection of Horizon 2020 projects contributing to the **European Green Deal**



### CLIMATE

BAMB allows for building construction to reduce its greenhouse gas emissions by 30-50% and its construction and demolition waste by 75%, by certifying and reusing materials, allowing components to be assembled, disassembled and reused.



### SOCIAL INNOVATION

SPARCs works with cities to develop solutions for the transition to a citizen-centred, zero-carbon and resource-efficient economy.



### BIODIVERSITY

AMBER has developed a framework and tools to help restore local river ecosystems by applying adaptive management to the operations of dams and barriers in EU rivers.



### ZERO-POLLUTION

DownToTen described the nature and characteristics of nanoparticles (<23 nm), and set up a demonstrator with sampling and measurement methodology. This led to novel measurement technology to support future regulation on particle emissions.



### SUSTAINABLE FOOD 'FARM TO FORK'

REFRESH prevents and reduces avoidable food waste across the supply chain by using insights from behavioural science to encourage better decision-making by industry and consumers.



### INDUSTRY AND CIRCULAR ECONOMY

E-Ferry is the world's best performing, 100% electric ferry, powered only by batteries. An E-Ferry operates between the Danish mainland and the island of Aero. It travels over 22 nautical miles, paving the way for similar ferry connections.



### HEALTHY OCEANS AND BLUE ECONOMY

MUSICA aims to decarbonise the electricity production of small islands using renewable energy. This will provide affordable electricity and energy storage systems, and support fresh water desalination and aquaculture.



### SUSTAINABLE INVESTMENT AGENDAS

Lactips makes water-soluble plastic packaging from milk by-products. Their first product on the market is a 100% bio-based and fully biodegradable soluble film for use in the detergent industry. Lactip received €1.5 million from the EIC and raised €3.7 million from private investment.



### BIO-BASED INDUSTRIES

FIRST2RUN demonstrated the technological, economic and environmental sustainability of a first-of-kind value chain for bio-based products, in partnership with local communities. Low-input and underutilised oil crops are converted into, inter alia, bioproducts, animal feed and energy.



### ENERGY

BIOSKOH demonstrates that second generation bio-ethanol can be produced at a lower and more economically viable price using abundant, secure, ILUC (indirect land use change)-free biomass. Using abandoned infrastructure in Slovakia, it converts side-streams into renewable energy.