

# **Climate neutrality**

Pathways for achieving the European Green Deal objectives



The European Union is committed to becoming climate neutral by 2050. This transition is essential if we want to avoid catastrophic climate change. Dramatic reductions in fossil fuel use and increased investments in green technologies, clean energy and transport, a more efficient industrial base, and climate-friendly food systems will be at the heart of achieving this goal.

The 14 research projects featured in this CORDIS Results Pack have developed a suite of tools that are able to assess the benefits, costs, risks and trade-offs of climate neutrality strategies. This provides a solid bedrock on which policymakers, business and society can make informed choices about the best route to a greener, cleaner and more equitable future for Europe.

To access the full pack please go to: cordis.europa.eu/article/id/418144



Research and Innovation

#### Climate neutrality Pathways for achieving the European Green Deal objectives

#### **CD-LINKS**

(Linking Climate and Development Policies – Leveraging International Networks and Knowledge Sharing), coordinated by the International Institute for Applied Systems Analysis in Austria

CD-LINKS specifically looked at interactions between climate policies and the United Nations Sustainable Development Goals to highlight the potential co-benefits of coordinated policymaking. The project team defined three policy design principles with a view to promoting evidence-based, multi-objective policymaking.

→ cd-links.org

#### COACCH

(CO-designing the Assessment of Climate CHange costs), coordinated by the CMCC Foundation in Italy

By emphasising those most affected by climate change, the COACCH project has found that its true cost is higher than previously estimated. Identifying socio-economic tipping points will help policymakers address climate challenges in a more targeted and coordinated manner.

--> coacch.eu

#### **COP21:RIPPLES**

(COP21: Results and Implications for Pathways and Policies for Low Emissions European Societies), coordinated by IDDRI in France

The COP21:RIPPLES project analysed the transformations in energy systems, and in the wider economy, that are required to implement the Paris Agreement and determined which steps are needed to attain deeper, even more ambitious decarbonisation targets, as well as the socio-economic consequences that this transition will trigger.  $\rightarrow$  cop21ripples.eu

#### DEEDS

(DialoguE on European Decarbonisation Strategies), coordinated by TNO in the Netherlands

Potential decarbonisation pathways for businesses and governments get narrower and riskier every day. The DEEDS project has identified specific agendas for research, policy recommendations and actions businesses can undertake today. Its results are already influencing the European Green Deal.

## ENGAGE

(Exploring National and Global Actions to reduce Greenhouse gas Emissions), coordinated by the International Institute for Applied Systems Analysis in Austria

One of the key challenges we face today is how society should tackle climate change and mitigate the impacts of global warming. The ENGAGE project has gathered key stakeholders to produce a new generation of global and national decarbonisation pathways.

→ engage-climate.org



© Rawpixel.com, Shutterstock



© Nick\_ Raille\_07, Shutterstock



© Ryan Rodrick Beiler, Shutterstock



© asharkyu, Shutterstock



© Victoria Denisova, Shutterstock

#### Climate neutrality Pathways for achieving the European Green Deal objectives

# EUCalc

(EU Calculator: trade-offs and pathways towards sustainable and low-carbon European Societies), coordinated by the Potsdam Institute for Climate Impact Research in Germany

Many are wondering what our lives and jobs will look like in a world with net zero carbon emissions. The EUCalc project has built an interactive pathways explorer to reveal how the Paris Agreement objectives will affect us all.

→ european-calculator.eu

# INNOPATHS

(Innovation pathways, strategies and policies for the Low-Carbon Transition in Europe), coordinated by University College London in the United Kingdom

Europe's road to recovery also needs to lead to a net zero carbon future. The INNOPATHS project offers a detailed look at decarbonisation pathways that promise economic, social and environmental gains.

→ innopaths.eu

# LOCOMOTION

(Low-carbon society: an enhanced modelling tool for the transition to sustainability), coordinated by the University of Valladolid in Spain

In order to avoid catastrophic climate change, Europe must reach peak emissions as soon as possible and reduce them rapidly thereafter. The LOCOMOTION project is developing an advanced integrated assessment model that will guide Europe's transition to a low-carbon society.

#### NAVIGATE

(Next generation of AdVanced InteGrated Assessment modelling to support climaTE policy making), coordinated by the Potsdam Institute for Climate Impact Research in Germany

Stakeholders need a reliable system that can assess the feasibility, effectiveness and cost of different policy options. The NAVIGATE project is boosting the capability of integrated assessment models in two key areas, to support the design and evaluation of effective climate policies.

→ navigate-h2020.eu

#### **Open ENTRANCE**

(Open ENergy TRansition ANalyses for a low-carbon Economy), coordinated by Sintef Energi in Norway

Open ENTRANCE is accelerating the transition to carbon neutrality with an open, transparent and integrated service for assessing low-carbon transition pathways, developed by a consortium of 14 partners in energy modelling.

→ openentrance.eu



© Romolo Tavani, Shutterstock



© artjazz, Shutterstock



© CHEN MIN CHUN, Shutterstock



© comzeal images, Shutterstock



© Hadrian, Shutterstock

# PARIS REINFORCE

(Delivering on the Paris Agreement: A demand-driven, integrated assessment modelling approach), coordinated by the National Technical University of Athens in Greece

PARIS REINFORCE enhances the legitimacy of climate policymaking by introducing an innovative stakeholder inclusion framework. The 3-year project brings together a consortium of 13 institutions to build an open-access data exchange platform to support the design of climate policies.

→ paris-reinforce.eu

## REINVENT

(Realising Innovation in Transitions for Decarbonisation), coordinated by Lund University in Sweden

The REINVENT project addresses sectors that have been slow to decarbonise, such as paper, steel and plastics. Key policy recommendations include stronger pressure on industry to formulate decarbonisation strategies, managing the phaseout of obsolete plants, and reducing demand for these materials.

--> reinvent-project.eu

# SENTINEL

(Sustainable Energy Transitions Laboratory), coordinated by the Swiss Federal Institute of Technology Zürich in Switzerland

The SENTINEL project illustrates that by enabling informed decision-making that takes into account all relevant aspects of the energy system, we can achieve net zero emissions in Europe while safeguarding a stable and affordable energy supply.

→ sentinel.energy

# SOCLIMPACT

(DownScaling CLImate imPACTs and decarbonisation pathways in EU islands, and enhancing socioeconomic and non-market evaluation of Climate Change for Europe, for 2050 and beyond), coordinated by the University of Las Palmas de Gran Canaria in Spain

An innovative online platform provides island communities with tailored networking opportunities, information and climate adaptation support tools. The unique resource developed by the SOCLIMPACT project will help businesses, policymakers and citizens to identify climate-related challenges and take action.

→ soclimpact.net

© Sandor Szmutko, Shutterstock



© Norenko Andrey, Shutterstock



© Treecha, Shutterstock



© Dmitry Rukhlenko, Shutterstock

Learn more about EU research on climate action: europa.eu/!rW68UY

Learn more about the European Green Deal: ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal\_en Follow us on social media too!

- @EUScienceInnov
- @cinea\_eu
- ① @EUScienceInnov

in @cinea-european-climate-infrastructure-environment-executive-agency

Luxembourg: Publications Office of the European Union, 2021  $\ensuremath{\mathbb{C}}$  European Union, 2021 Reproduction is authorised provided the source is acknowledged.



ISBN 978-92-78-42701-6 doi:10.2830/541315 ZZ-03-21-424-EN-C ISBN 978-92-78-42702-3 doi:10.2830/154356 ZZ-03-21-424-EN-N



europa.eu/!DxfMkv