



A 2050 vision for a carbon-neutral Europe: opportunities for climate initiatives

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★ The context: climate neutrality by 2050

★ Policies

- ★ Land Use, Land Use Change and Forestry
- ★ Carbon Farming
- ★ LIFE



Paris Agreement Ambition

Global goals

★ Mitigation (reducing emissions)

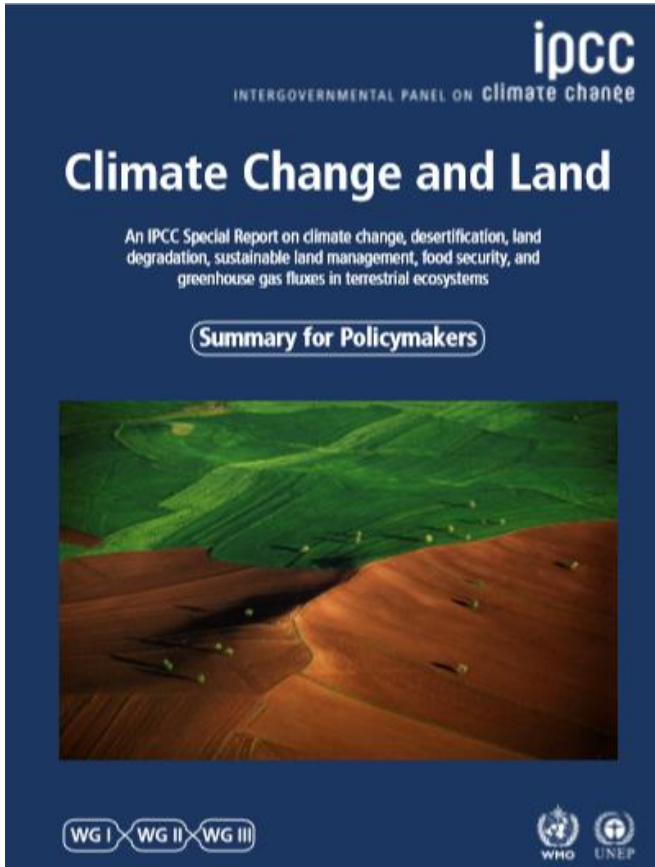
- ▶ Well below +2deg C + Efforts to limit increase to +1.5deg C
- ▶ Balance between emissions and removals of greenhouse gases by the 2nd ½ of this century

★ Adaptation

- ▶ Enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21-CMP11



CORRIERE DELLA SERA

IL RAPPORTO

Allarme Onu, il riscaldamento globale aumenterà fame e migrazioni

Il nuovo studio suggerisce anche di diminuire il consumo di carne e latticini. Coldiretti: danni per 14 miliardi all'agricoltura italiana nell'ultimo decennio

The Guardian

Climate crisis reducing land's ability to sustain humanity, says IPCC

UN report finds ecosystems never before under such threat and restoration is urgent

- [How climate's impact on land threatens civilisation - and how to fix it](#)

Le Monde

Un rapport spécial du GIEC : l'humanité épuise les terres

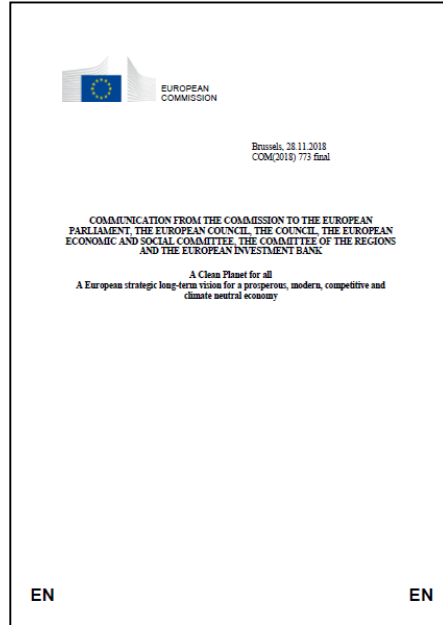
Les experts de l'ONU avertissent sur la surexploitation des ressources, qui menace la sécurité alimentaire, appauvrit la biodiversité et amplifie les émissions.

Par Pierre Le Hir - Publié le 08 août 2019 à 10h00 - Mis à jour le 09 août 2019 à 10h21

The New York Times

Climate Change Threatens the World's Food Supply, United Nations Warns

<https://www.ipcc.ch/srccl-report-download-page/>



Communication “A Clean Planet for All” (Long Term Strategy) (Nov 2018)

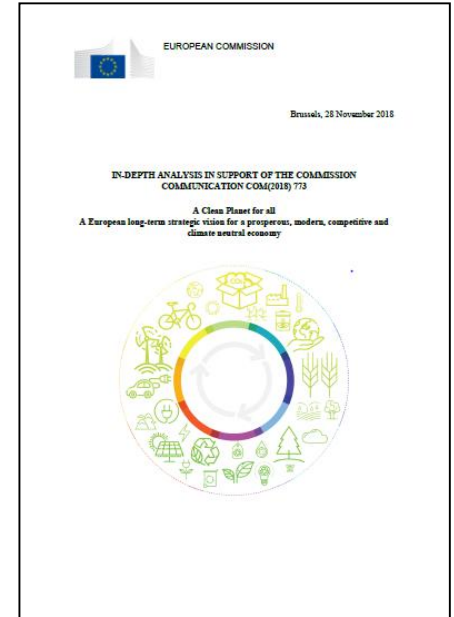
25 pages

<https://europa.eu/uJ83HG>

In depth analysis supporting the Communication

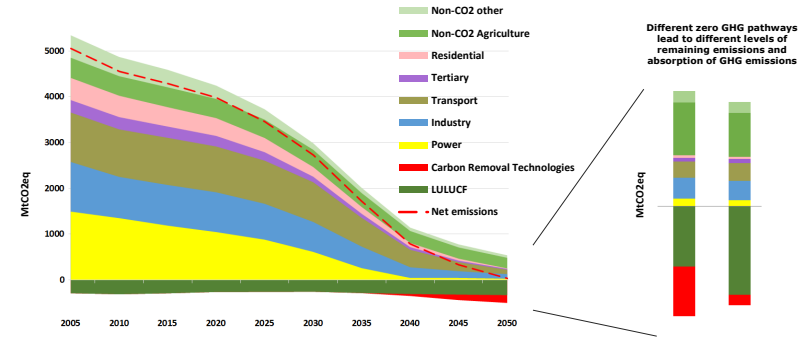
393 pages

<https://europa.eu/!JX39VJ>



Our Vision for a Clean Planet by 2050

- ★ Commission vision for EU long-term strategy: **climate-neutral EU by 2050** (net zero GHG emissions)
- ★ **Substantial transformations:** energy system, buildings, transport, industry, agriculture
- ★ A number of pathways – **challenging but feasible** from technological, economic, environmental and social perspective





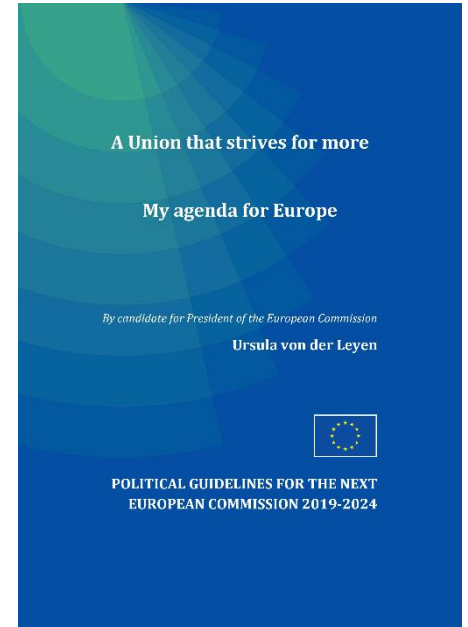
Ursula von der Leyen

President-elect



Frans Timmermans

First Vice-President
Executive Vice-President-designate
for the European Green Deal





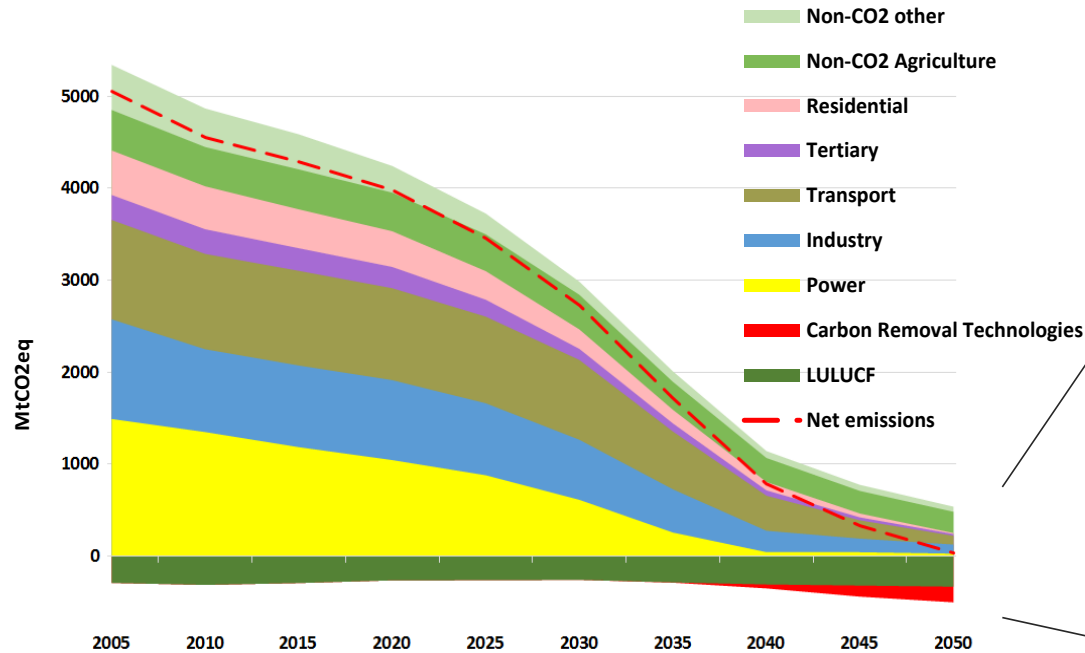
The European Green Deal

➤ Europe to become climate-neutral by 2050

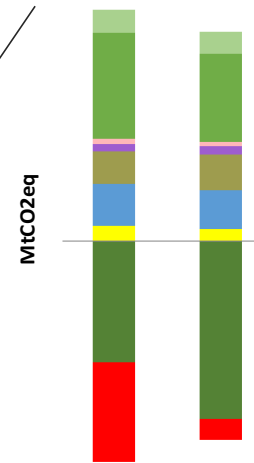
- Proposal within the first 100 days in office, including first European Climate Law
- Extension of the ETS
- Border Carbon Tax
- Just Transition Fund
- Strategy for green financing and a Sustainable Europe Investment Plan
- Parts of the EIB become EU's climate bank
- Increase EU's target for 2030 to 50%, if possible to 55%

➤ **Environment** (Biodiversity Strategy, sustainable food policy, zero-pollution ambition, circular Economy Action Plan, single-use plastics and micro-plastics)

Vision 2050: A climate-neutral EU



Different zero GHG pathways lead to different levels of remaining emissions and absorption of GHG emissions



Land use contribution to climate policies



ADAPT to climate change

- Water retention
- Choice of resilient crops
- Enhance soil quality
- Agro-forestry

REDUCE GHG emissions

- Precision farming
- Breeding
- Nitrification inhibitors
- Anaerobic digestors
- Energy efficiency

ENHANCE carbon removals

- Afforestation
- Limit deforestation
- Enhance forest carbon sink
- Sustainable soil management
- Wetland management

PROMOTE the bioeconomy

- Bio-feedstocks for industry and power sectors
- Advanced biofuels
- Substituting building materials

EU Adaptation Strategy

Effort Sharing

Land Use, Land Use Change and Forestry

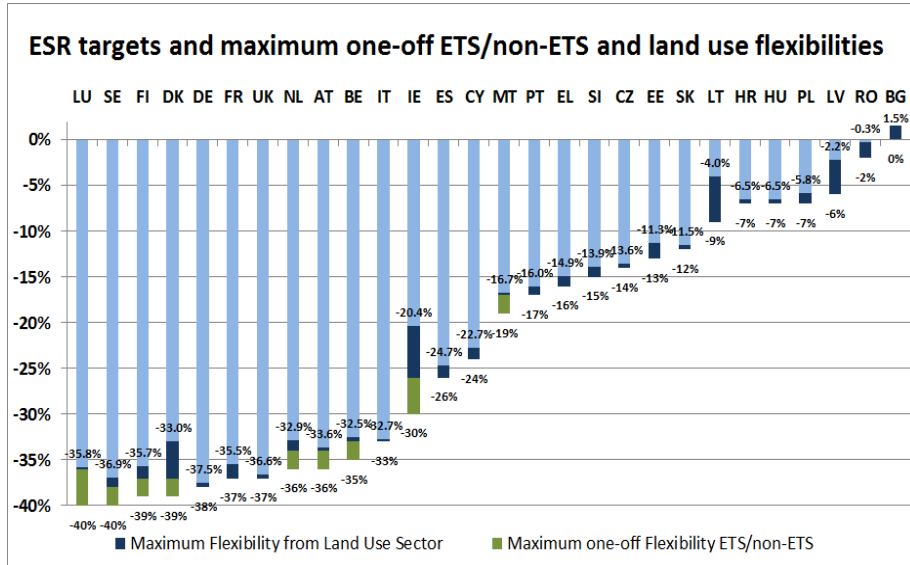
Emission Trading (substitution effect)

EU Governance Regulation

EU Climate framework

National targets, Regs (EU)2018/842 and 2018/841

Including non-CO2 agriculture, transport, waste, buildings, land



- ★ Every Member State has an emission reduction target by 2030
- ★ The allocation of the targets is proportional to GDP
- ★ Member State can achieve part of these targets with credits generated in the land (LULUCF) sector
- ★ Countries with a larger agricultural sector can use more LULUCF credits to comply with Effort Sharing targets

Land Use, Land Use Change and Forestry

- ★ LULUCF includes all impacts on GHG of human management of vegetation and soils
 - ★ cropland, grassland, forests, wetlands
- ★ Both emissions and removals
- ★ LULUCF today is approx. 10% removal of the EU's total GHG budget
- ★ The forest sink, however, is projected to decline in some Member States and the EU
- ★ Additional effort can maintain these removals



Carbon Farming Schemes

Ongoing activities in DG CLIMA

- ★ Study to create guidelines on EU Carbon Farming
- ★ LIFE Call (under award process) for a *preparatory project* on Carbon Farming

Under a result-based CAP MS can design direct incentives to climate action:

- ★ E.g. “carbon farming” payments for carbon sequestration
- ★ Climate action can become a new source of income for farmers

LIFE programme 2021-2027

- ★ Proposed **budget of €5,45 billion**, divided into **two fields**:
 - ★ **Environment** with 2 sub-programmes
 - ★ Nature and Biodiversity (€2,15 bn)
 - ★ Circular Economy and Quality of Life (€1,35 bn)
 - ★ **Climate Action** with 2 sub-programmes
 - ★ Climate Change Mitigation and Adaptation (€0,95 bn)
 - ★ Clean Energy Transition (€1 bn)
- ★ Building on previous LIFE programmes, more focus on strategic projects
- ★ **National contact points** for guidance on formulating applications

Examples of LIFE projects (mitigation)

Projects can contribute to the wider adoption of*:



- ★ Conservation agriculture
- ★ Agro-forestry
- ★ Wetland management (e.g. peatland restoration)
- ★ Sustainable forest management
- ★ Enhanced soil carbon management
- ★ Carbon accounting tools
- ★ Local “Carbon Farming” schemes (carbon credit markets)
- ★ Improved monitoring of carbon emissions and removals

- ★ Replacement of fossil-based materials with bio-based materials
- ★ Bio-based circular economy

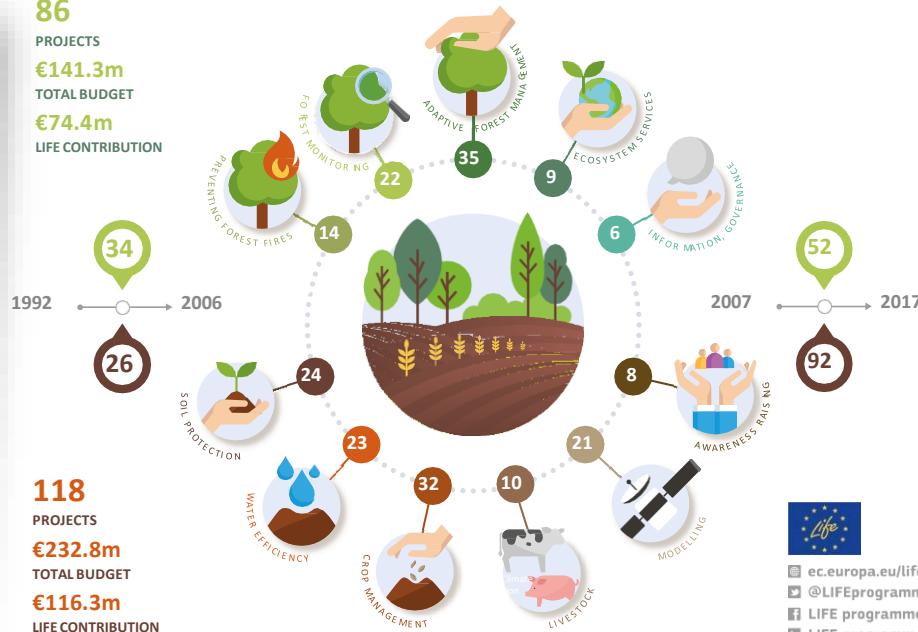
- ★ Improved nutrient management and nitrogen fixing
- ★ Better livestock management (feeding, breeding...)
- ★ Better manure management

* Non-exhaustive lists

Examples of LIFE projects (adaptation)



86
PROJECTS
€141.3m
TOTAL BUDGET
€74.4m
LIFE CONTRIBUTION



118
PROJECTS
€232.8m
TOTAL BUDGET
€116.3m
LIFE CONTRIBUTION



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- The Green Link** **90 %** tree survival rate
- LIFE AgroClimaWater** **15 %** water saved on olive and citrus farms
- LIFE VinEcoS** **22 %** less pesticides used on vineyards
- LIFE BIODELEAR** **0 %** insecticide used on fruit orchards
- SigAGROasesor** **400** farmers given real-time recommendations
- PTD LIFE** **120** livestock breeders tested adaptive grazing plans
- LIFE+ DEMORGEST** **60 %** extra CO₂ savings alongside new anti-forest fire practices
- LIFE+ ForBioSensing PL** **22 million** trees mapped to track climate change effects



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