



# Climate impacts of the livestock sector and development of effective EU policy

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**DG CLIMA**  
**26 August 2019**

# Land use and agriculture emissions: a story of split personality

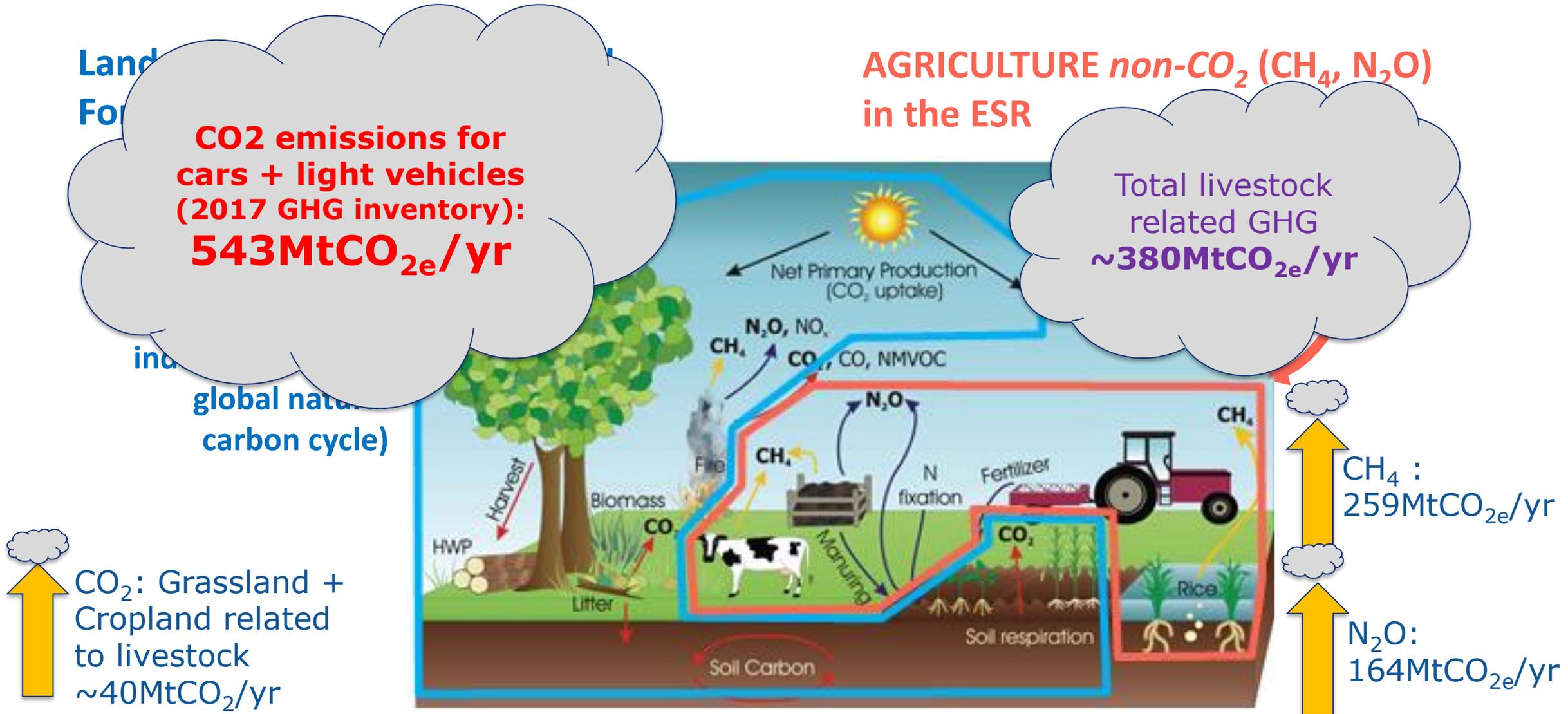


Figure source: IPCC 2006. Data: EEA 2019 (2017 GHG inventory)

# 2030 Climate and Energy Framework

**-40 % Greenhouse Gas Emissions (domestic EU)  
cf. 1990**

**ETS**  
Emission Trading  
System  
-43 %  
cf. 2005  
*Including:  
Power/Energy  
Sector and  
Industry, Aviation*

→  
*Max 100  
MtCO<sub>2</sub>e*

**Non-ETS**  
-30% cf. 2005  
*Including: road transport,  
buildings, waste, **agriculture**,  
LULUCF*

**ESR**  
-30%

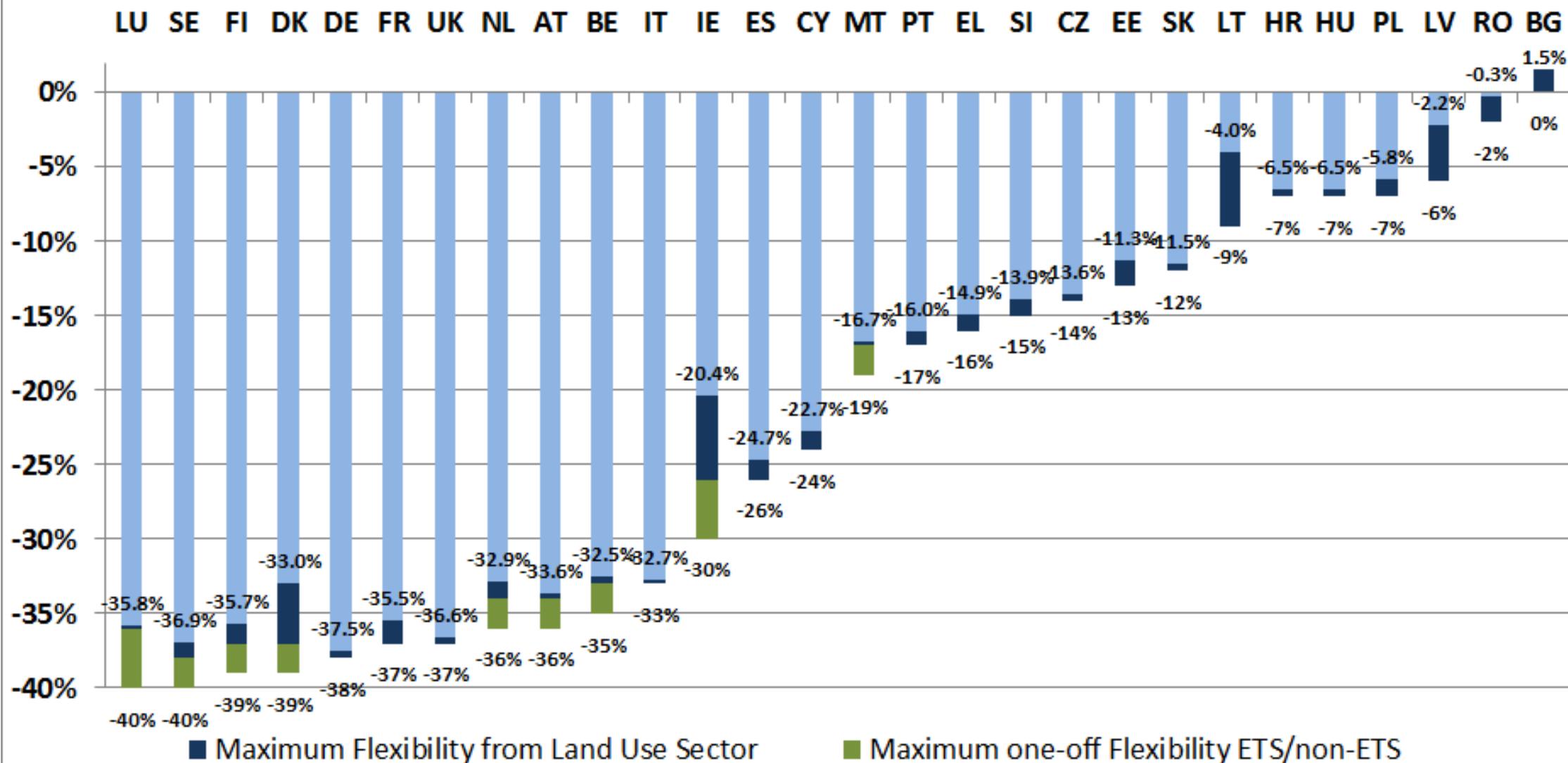
→  
*Full  
flexibility*  
←  
*Max 280  
MtCO<sub>2</sub>e*

**LULUCF**  
"No-Debit"

**Includes  
Agricultural  
CH<sub>4</sub> + N<sub>2</sub>O**

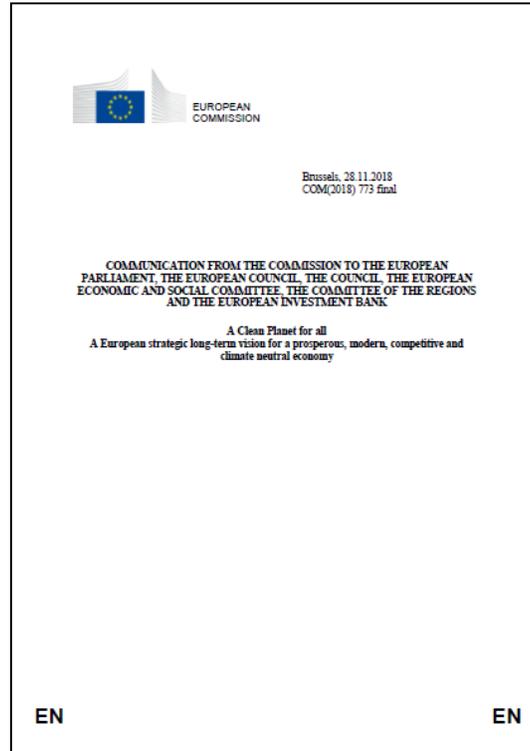
**Includes  
Agricultural  
CO<sub>2</sub>**

# ESR targets and maximum one-off ETS/non-ETS and land use flexibilities





European  
Commission



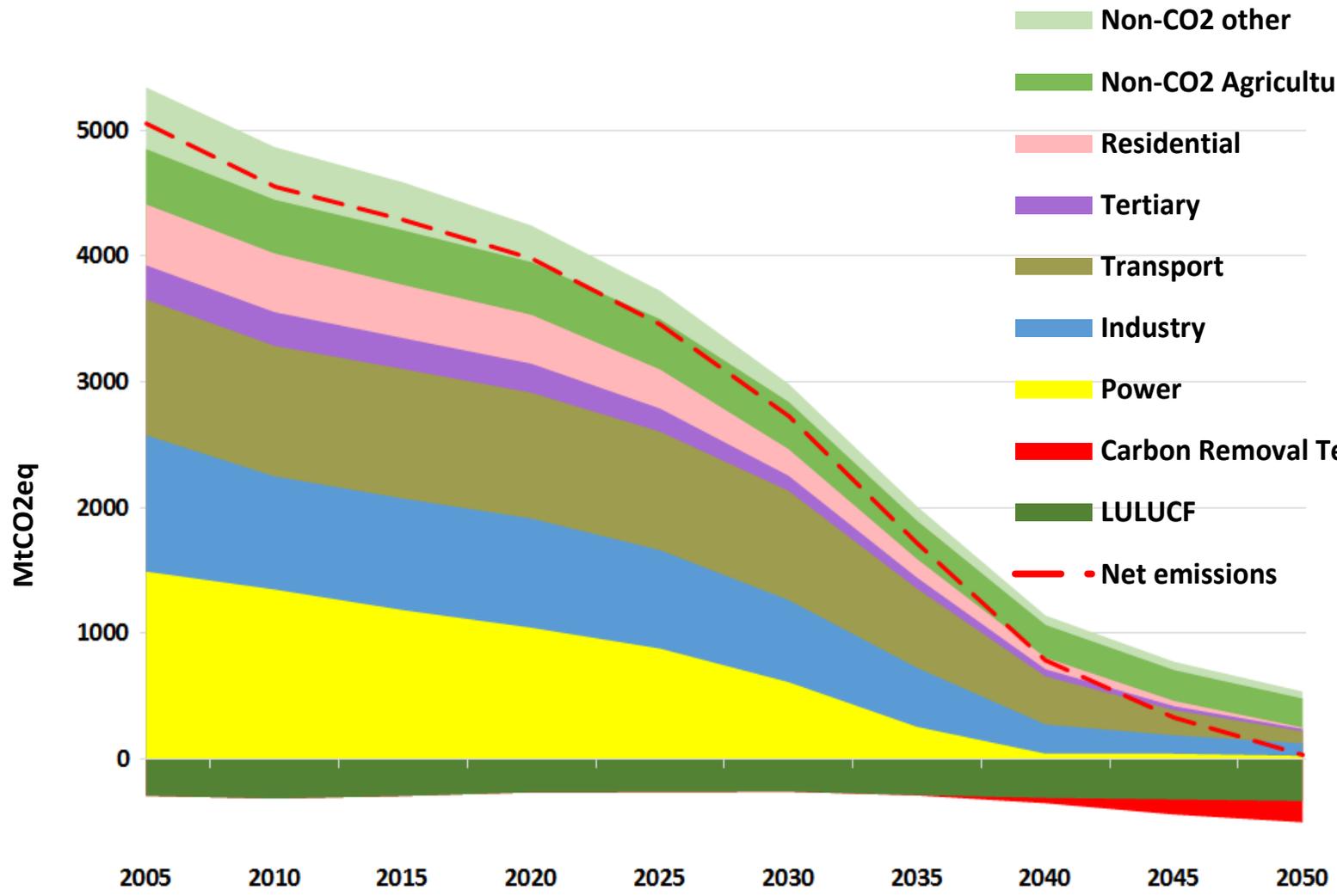
## Communication on the proposed Long Term Strategy, 25 pages

<https://europa.eu/!uJ83HG>

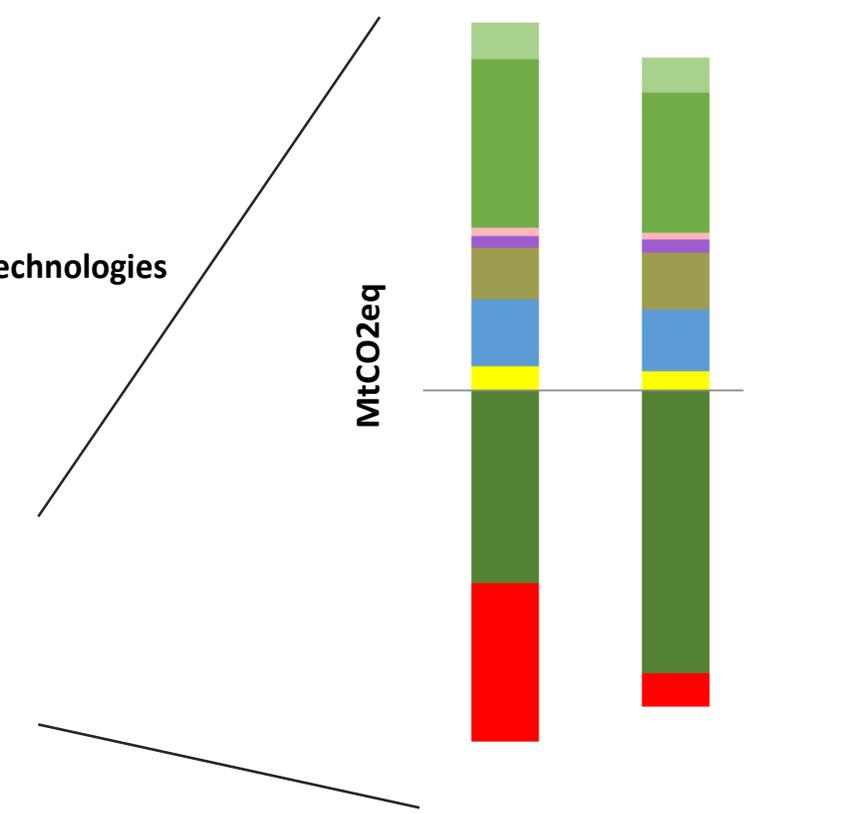
**In depth analysis supporting the Communication, Long Term Strategy, 393 pages**

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

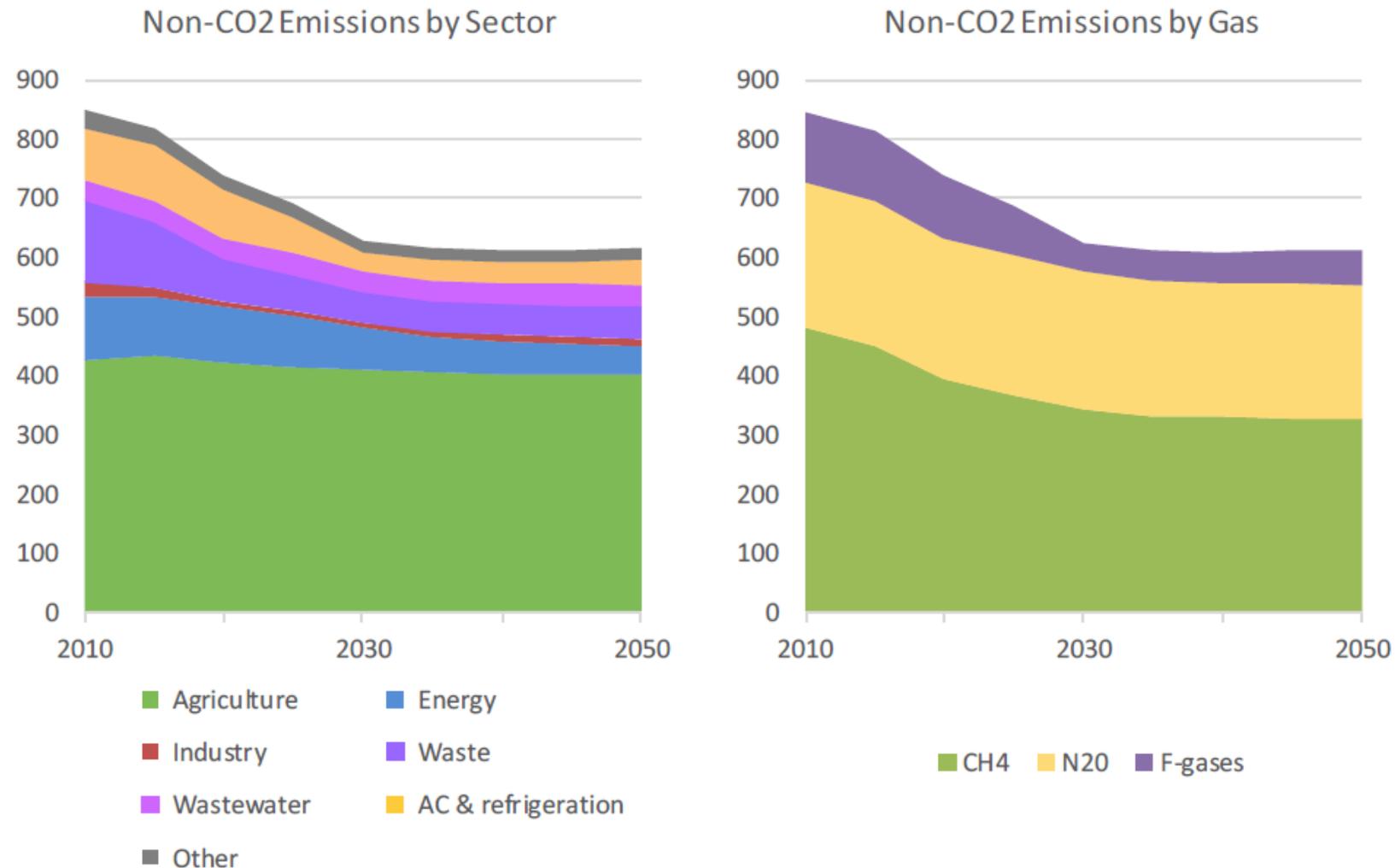


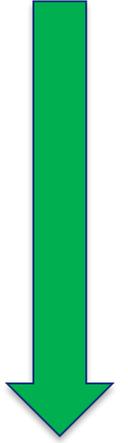


**Different zero GHG pathways lead to different levels of remaining emissions and absorption of GHG emissions**

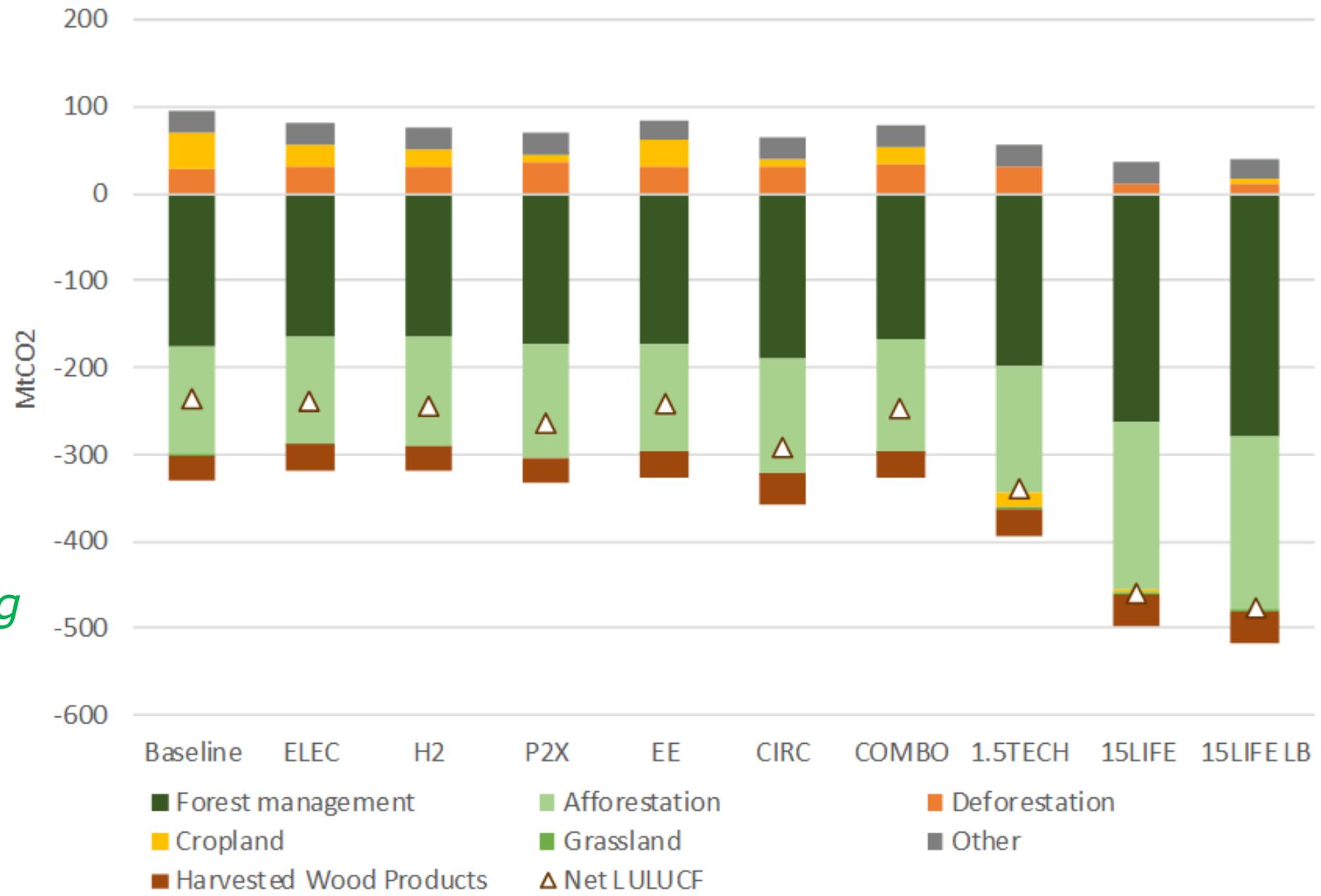


# Non-CO<sub>2</sub> emissions are projected to reduce by 50% in 2050 (cf. 1990)





*Sink –  
absorbing  
CO<sub>2</sub> in  
forestry*



REGULATION (EU) 2018/1999 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 11 December 2018

on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council

(Text with EEA relevance)

- *Sets out national GHG inventory reporting*
  - **Implemented acts under development; based upon existing framework (Arts. 26, 37, plus annexes)**
- *Provides framework for policy development*
  - **National Energy and Climate Plan (revision due by end 2019)**
  - **Long Term Strategy (Art. 15, 1/1/2019)**
  - **National policies and measures, projections (Art. 39)**
  - **Links to sector policies => CAP Strategic plan (2021?)**



# Climate in the EU Common Agricultural Policy (CAP)

- 40 % of the overall budget of the CAP is expected to contribute to the climate objectives
- One of the nine objectives is “**climate mitigation / adaptation & sustainable energy**”
- Member States design a “**CAP Strategic Plan**” to explain how budget will be used to achieve each of the 9 objectives:
  - Identify needs: ***What are the main challenges in terms of climate mitigation / adaptation?***
  - Identify SWOTs: ***What are the biggest climate vulnerabilities? Where is the largest mitigation potential? What are win-win solutions that increase productivity and/or promote bioeconomy sectors?***

## Effective performance of tools for climate action policy - meta-review of Common Agricultural Policy (CAP) mainstreaming

Specific contract number 340202/2014/688088/SER/CLIMA.A.2 implementing Framework Contract CLIMA.A.4/FRA/2011/0027

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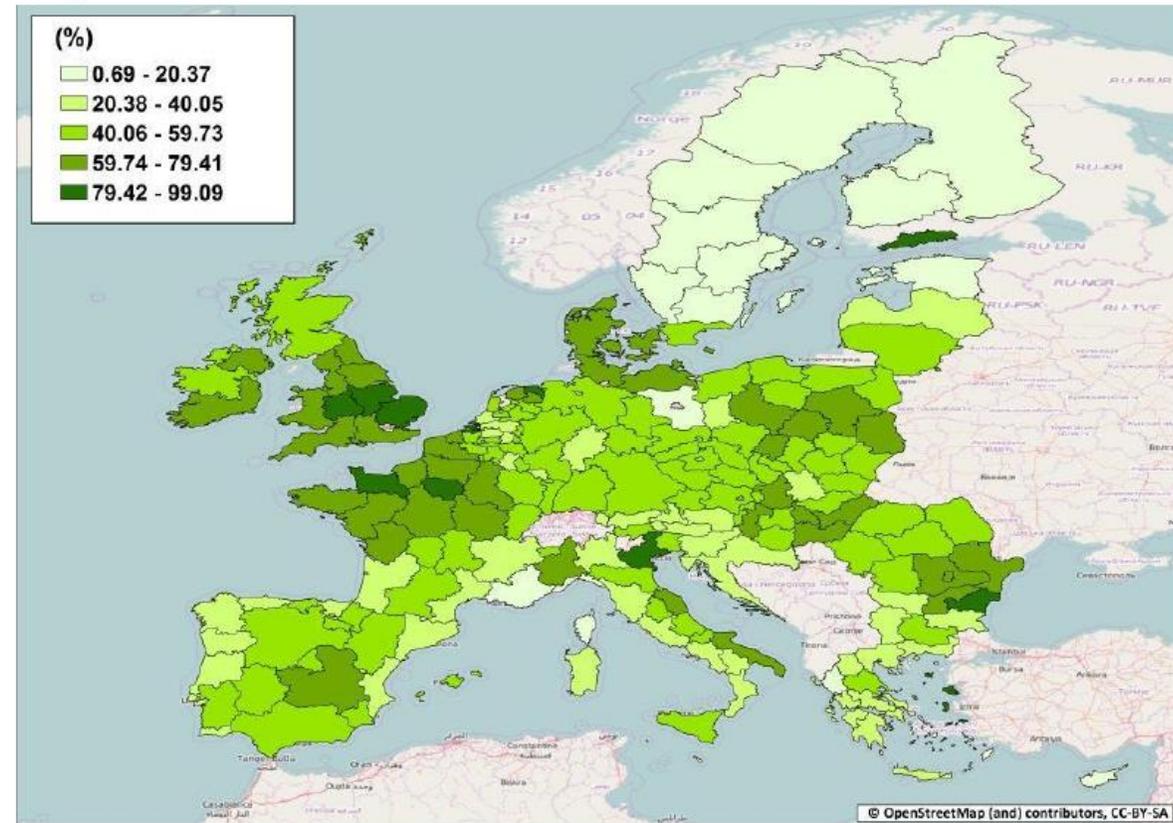
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<https://europa.eu/!pb39yB>

Table 69: Groupings of mitigation actions

Group	Mitigation actions
Land Use	<ul style="list-style-type: none"> <li>• Conversion of arable land to grassland to sequester carbon in the soil</li> <li>• New agroforestry</li> <li>• Wetland</li> <li>• Woodland</li> <li>• Prevent</li> <li>• Manage and tree</li> </ul>
Crop Production	<ul style="list-style-type: none"> <li>• Reduce</li> <li>• Zero Till</li> <li>• Leaving</li> <li>• Ceasing</li> <li>• Use cov</li> </ul>
Livestock Production	<ul style="list-style-type: none"> <li>• Livestoc</li> <li>• Use of s</li> <li>• Breedin</li> <li>• Feed ad</li> <li>• Optimis</li> </ul>
Nutrient and Soil management	<ul style="list-style-type: none"> <li>• Soil and</li> <li>• Use of r</li> <li>• Improve</li> <li>• Biologic</li> </ul>
Energy	<ul style="list-style-type: none"> <li>• Carbon</li> <li>• Improve</li> </ul>

Figure 61: Land in agricultural production as a percentage of total area for each NUTS 2 region



Reporting of the mitigation effect

A summary of how the mitigation from implementation of this action is reported in national inventory reports, is given in Table 48.

# Synergies with future agricultural policy

## 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  
Changing consumer preferences

## PROMOTE the bioeconomy

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

## ENHANCE carbon removals

Afforestation  
Limit deforestation  
Improve standing stocks / increment rates  
Sustainable soil management  
Wetland management

**EU Adaptation Strategy**

**Emissions trading, Effort Sharing, LULUCF, Renewable Energy Directive, Energy efficiency**

**EU climate & energy policy framework**



European Commission

# Summary

*The climate regulation framework for 2021-2030:*

- **Connects land use (CO<sub>2</sub>) with other sectors (ESR)**
  - notably agriculture, and **CH<sub>4</sub> (main component)** and N<sub>2</sub>O gases
- **Agriculture creates around 11% of total EU GHG emissions (2017 data)**
- **Livestock GHG emissions is a very significant component**
  - About  $\frac{3}{4}$  of that of cars and light vehicles
- **Internationally agreed reporting and accounting rules provide a standard and comparable framework**
- **The framework encourages **additional** initiatives to meet reduction target, through policy support such as CAP, H2020**
- **Sets out the long term pathway towards the proposed EU 2050 climate neutral objective**