

LULUCF: The importance of Land Use, Land Use Change and Forestry for Ireland

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Overview



- LULUCF: What it is and its
- Trends in land use over time
- Emissions and Removals from LULUCF
- LULUCF Regulation (841/2018)
- What is being done
- Conclusions

What is LULUCF



- LULUCF – Land Use Land Use Change and Forestry
- Includes both greenhouse gas emissions and removals associated with activities on land
- LULUCF is not new
- Reported separately to agriculture in line with international reporting guidelines

What is LULUCF

- Land uses included and conversions to & from
 - Forest Land
 - Cropland
 - Grassland
 - Wetlands
 - Settlements
 - Other Land
- 5 carbon pools are assessed in each land use
- Emissions of N₂O and CH₄ which are not already reported in agriculture also included

What is LULUCF



- Land Cover ≠ Land Use
- Land Cover = physical material on the surface of the earth
- Land Use = management /use of the material on the surface of the earth
- Other issues to note
 - Forest definition
 - Peatlands vs organic soil

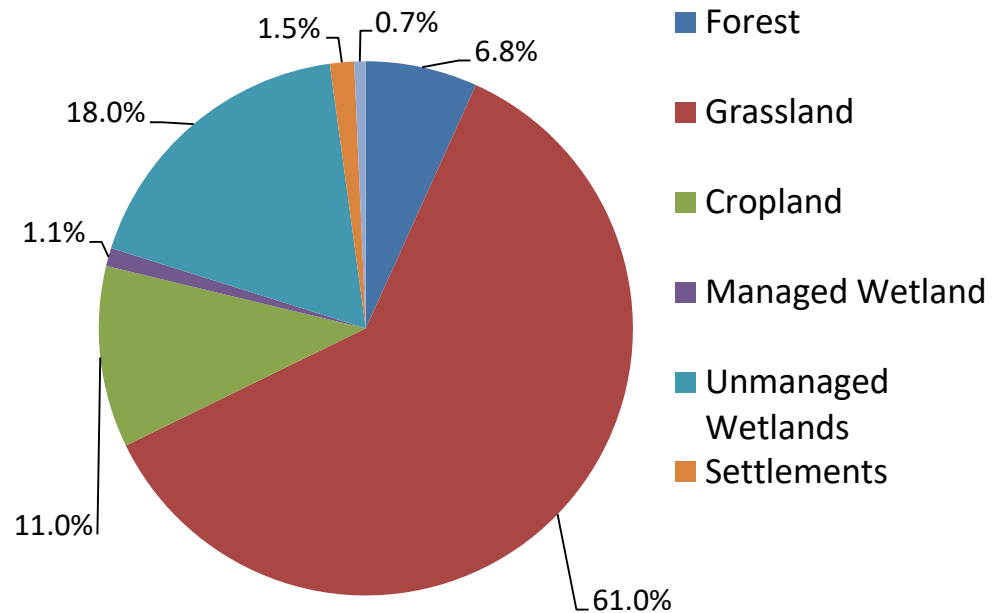
Why LULUCF ?



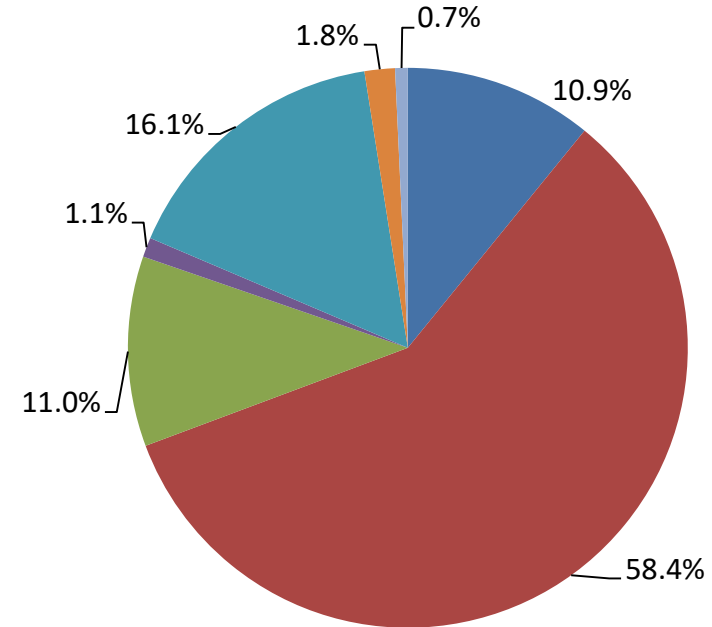
- Effort Sharing Regulation & LULUCF Regulation
 - LULUCF has the potential to provide long-term climate benefits
 - Multiple objectives of the agriculture and land use sectors with their lower mitigation potential
 - Sustainable land management practices
 - 26.8 Mt CO₂ eq land based credits in recognition of contribution of agriculture to Irelands ghg emissions
 - Climate Action Plan actions

Trends in land use over time

Proportion of Land Use 1990



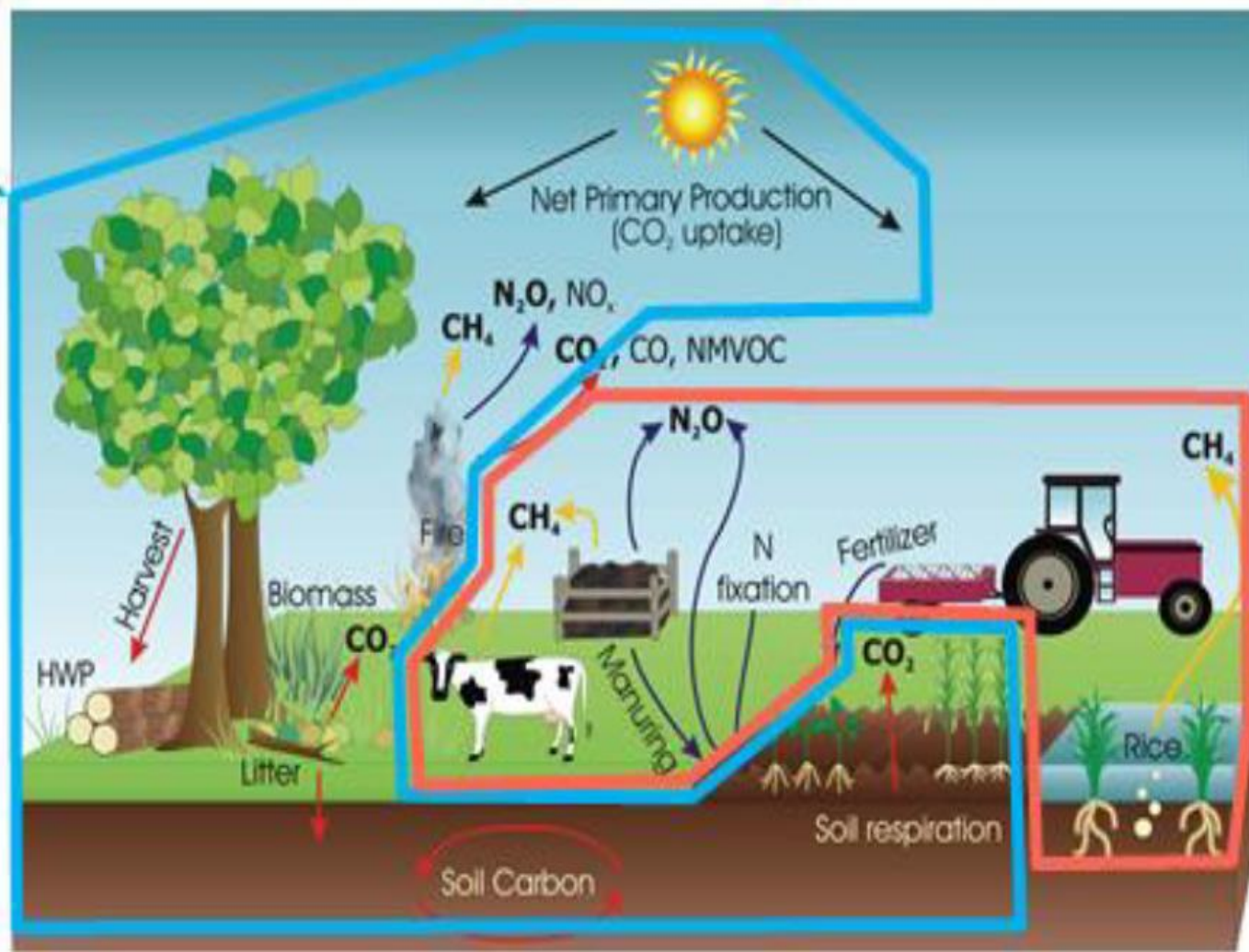
Proportion of Land Use 2018



CO₂ from Land Use: Land Use, Land Use Change and Forestry (LULUCF)

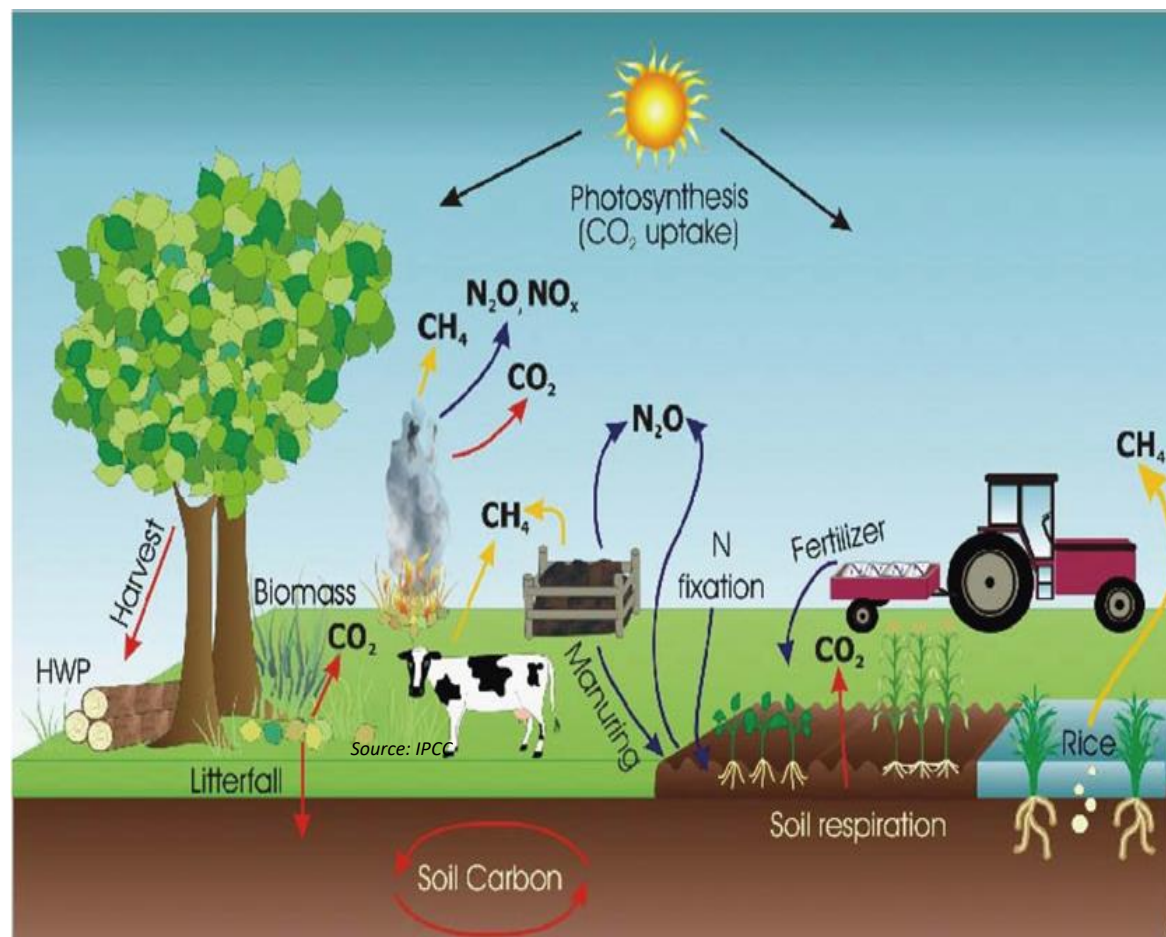
Agriculture non-CO₂ (CH₄, N₂O): Effort Sharing Regulation

Partly human induced
(linked to global natural carbon cycle)



All human-induced

Emissions and Removals from LULUCF



LULUCF category	kt/CO ₂ eq	
	1990	2018
A. Forest land	- 3,710	- 3,560
B. Cropland	30	- 160
C. Grassland	7163	6,968
D. Wetlands	1764	1656
E. Settlements	87	170
F. Other land	1.0	50
G. Harvested wood products	-410	- 826
Total	4,703	4,298

LULUCF Regulation (841/2018)



- 7 accounted for land use disaggregation's
- Afforested land
- Deforested land
- Managed forest land
- Managed cropland
- Managed grassland
- Managed wetland
- Harvested wood products

LULUCF Regulation (841/2018)



- Base period is average emissions and removals in 2005-2009
- Two compliance periods
 - 2021 to 2025
 - 2026 to 2030
- Over the period 2021 – 2030 , land use flexibility of 26.8 Mt CO₂eq available to Ireland

LULUCF Regulation (841/2018)



- Forestry, Grasslands and Cropland
- Wetlands mandatory for second period 2026-2030
- Legislation also requires projection of future emissions and removals including the effect of policies and measures
- Work required to build systems to track land use and land use change and estimate emissions and removals to meet reporting requirements

What is being done

- National research – EPA and DAFM
 - Soil Carbon modelling
 - Peatlands research
 - Water table manipulation
 - Biomass content of hedgerows
 - Further work required esp. soil C measurements
- Land cover and land use mapping
 - National Land Cover Mapping Programme
 - LULUCF Regs and spatial land use mapping
 - Use available information in terms of national datasets
 - Significant stakeholder involvement

Conclusions

- Deliver the full flexibility available to Ireland – Action 132 of the Climate Action Plan
- To meet longer term climate goals afforestation rates need to increase
- Detailed analysis is and will be required to demonstrate progress
- Data is king and significant stakeholder involvement is needed

Conclusions

- Appropriate land management is a vital part of action on climate change
- Where land management provides a store of carbon e.g. forestry – maintain or enhance
- Where land management is an emitter of CO₂ e.g. grasslands on organic soils – reduce or eliminate
- Where land is degraded and lost its ability to store carbon– it should be restored