

Agricultural GHG emissions, reduction targets and strategies in Ireland

Prof. Tommy Boland

School of Agriculture and Food Science, University College Dublin, Belfield,
Dublin 4, Ireland



tommy.boland@ucd.ie



@Pallastb





Irish Agriculture at a glance!



An
Phríomh-Oifig
Staidrimh

Central
Statistics
Office

Census Of Agriculture 2020 Preliminary Results

Total Number of Farms

135,037

Average Farm Size

33.4 ha



Total Agricultural Area

4,509,256 ha

Grassland
4,151,456 ha

Cereals
265,592 ha

Other Crops,
Fruit and
Horticulture
92,208 ha



Irish Food and Drink Exports in 2022

Dairy



€6.8
billion

33%
increase

Exports are estimated to amount to €6.8 billion, an increase of 33% in value terms.

Top performers were **butter and cheese**, which recorded another year of strong performance, up **26%** and **25%** respectively in value.



Meat and Livestock



€4
billion

15%
increase

Meat and Livestock exports in 2022 are valued at just over €4 billion resulting in a 15% value increase.



Beef was the largest contributor to this growth, though product prices increased across all species.

Prepared Consumer Foods



€3
billion

17%
increase

PCF exports recorded a 17% increase in value to exceed €3 billion in 2022.

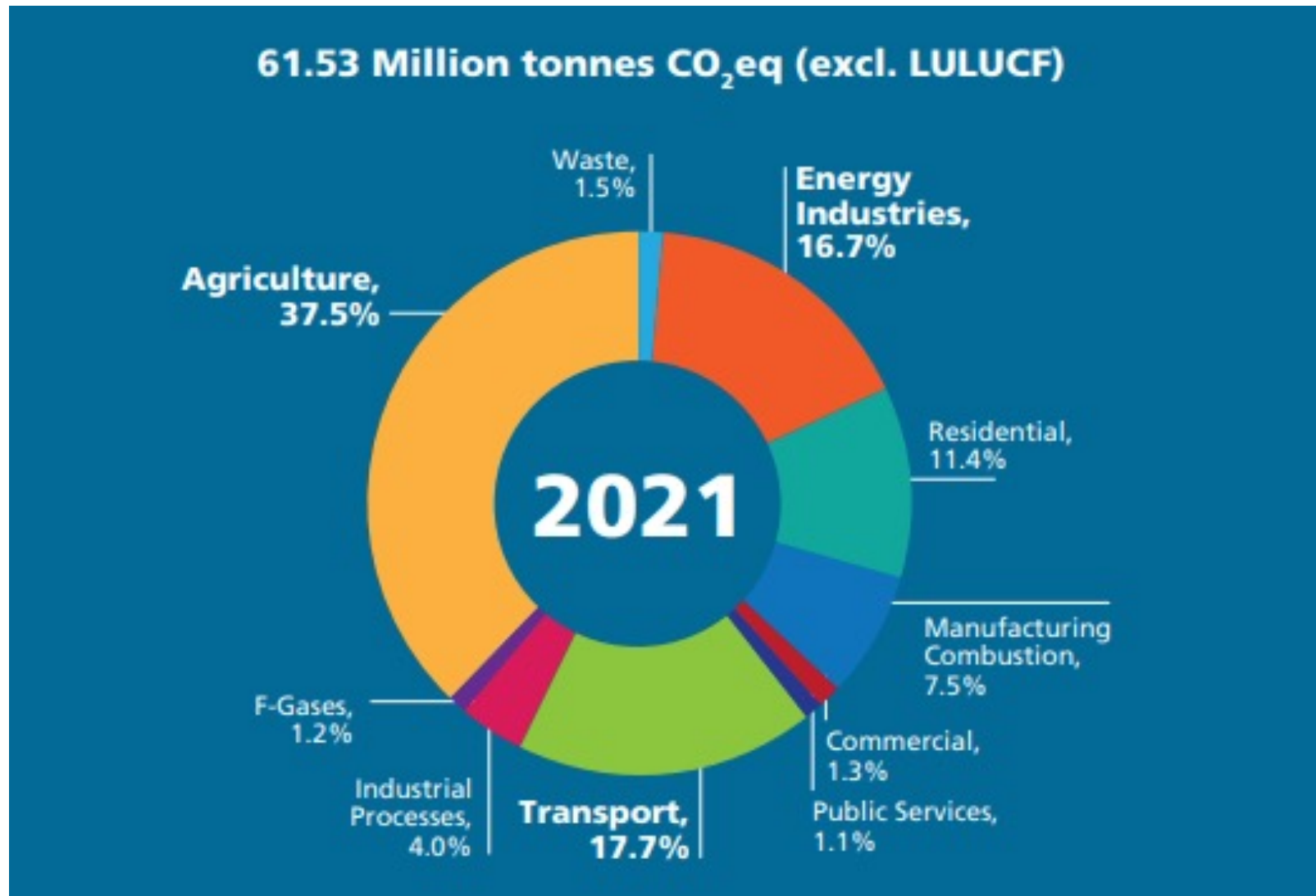


The **UK** market accounts for two thirds of exports.

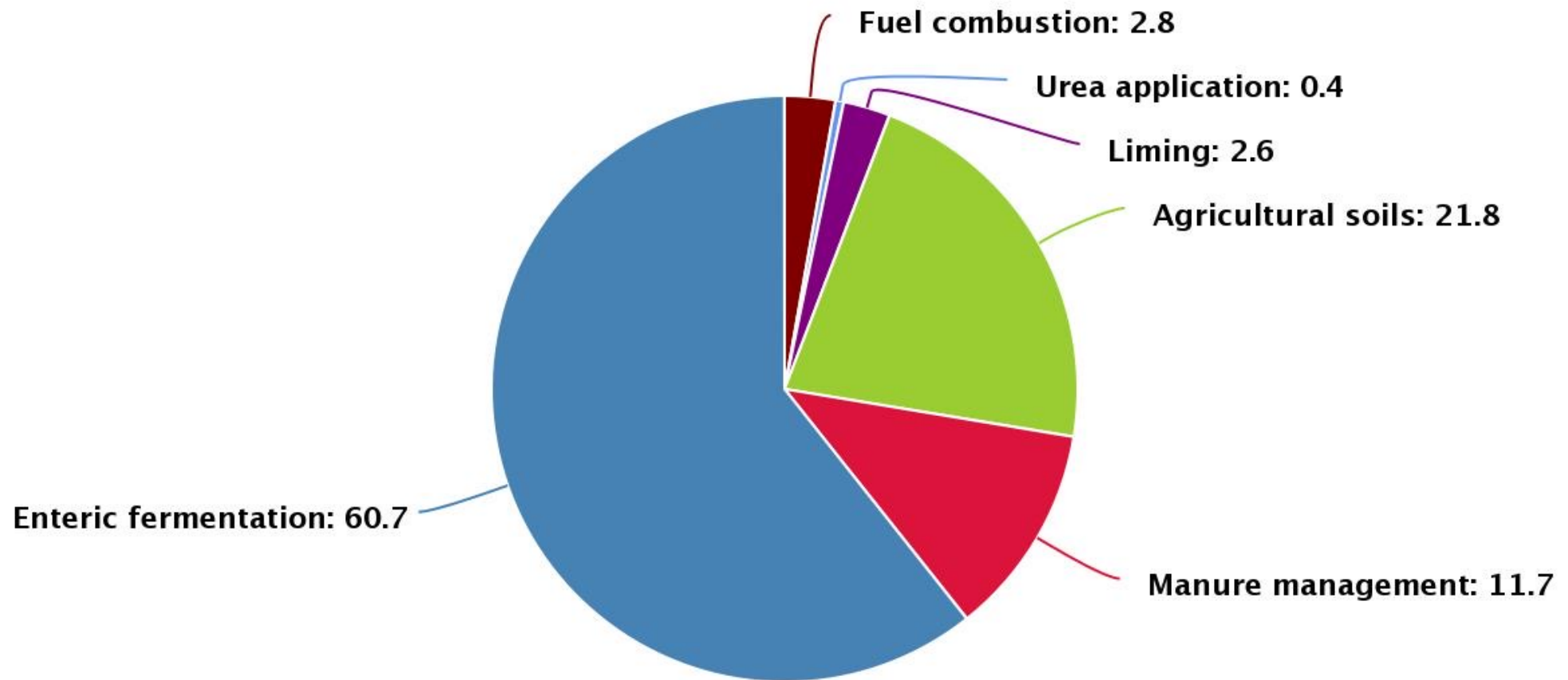
Value added meat products increased by 30% compared with 2021, helped by the sustained reopening of the foodservice channel in most markets.



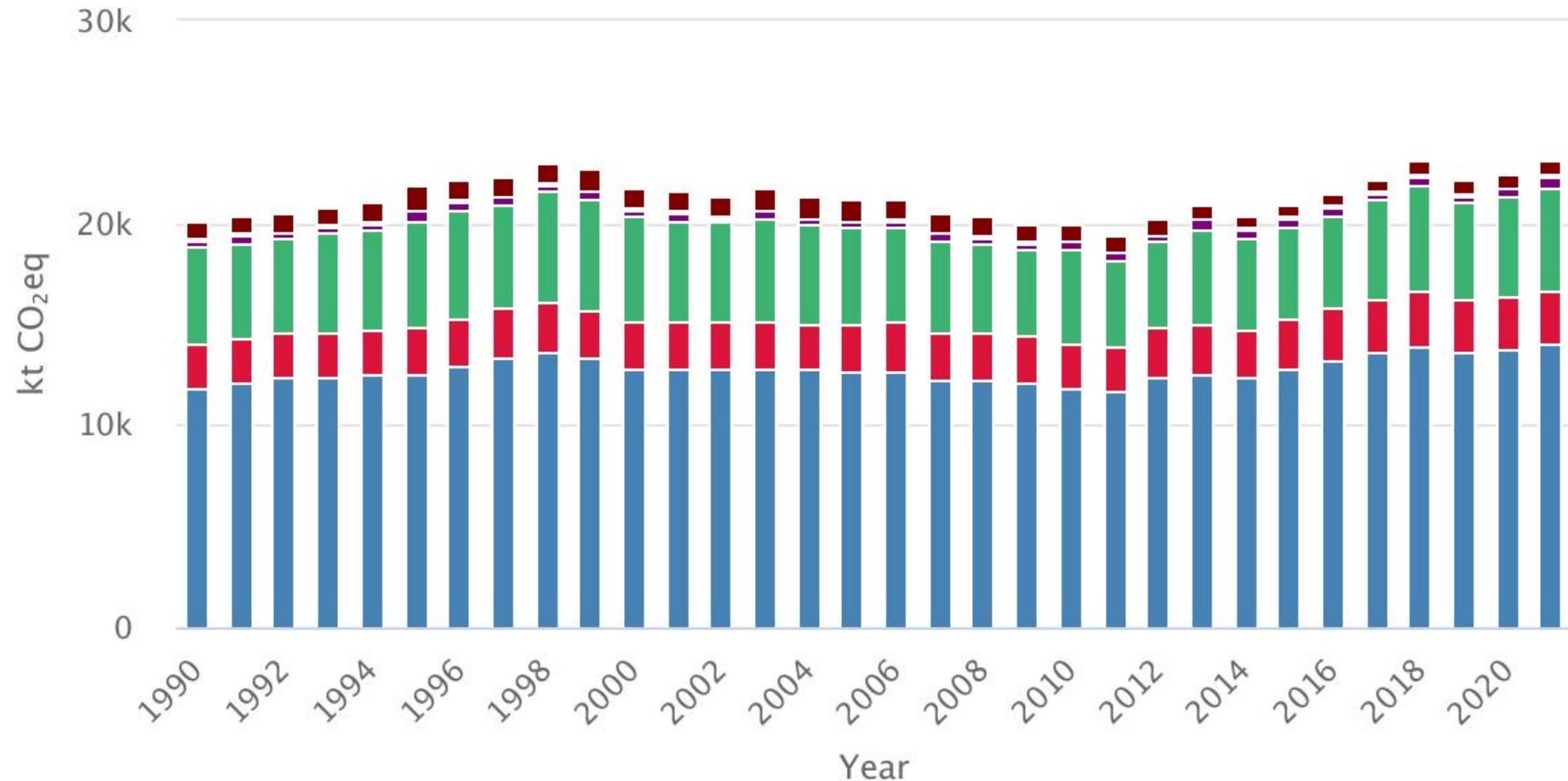
Sectoral breakdown of Irish GHG emissions



Agricultural GHG emissions share by source

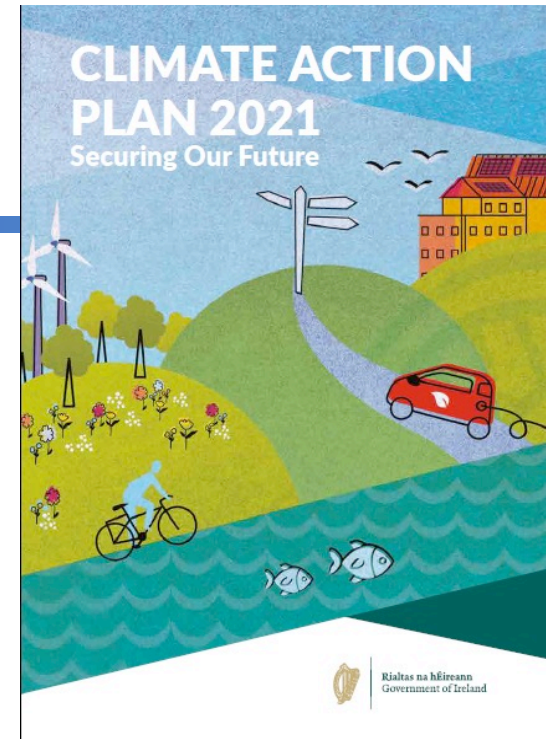
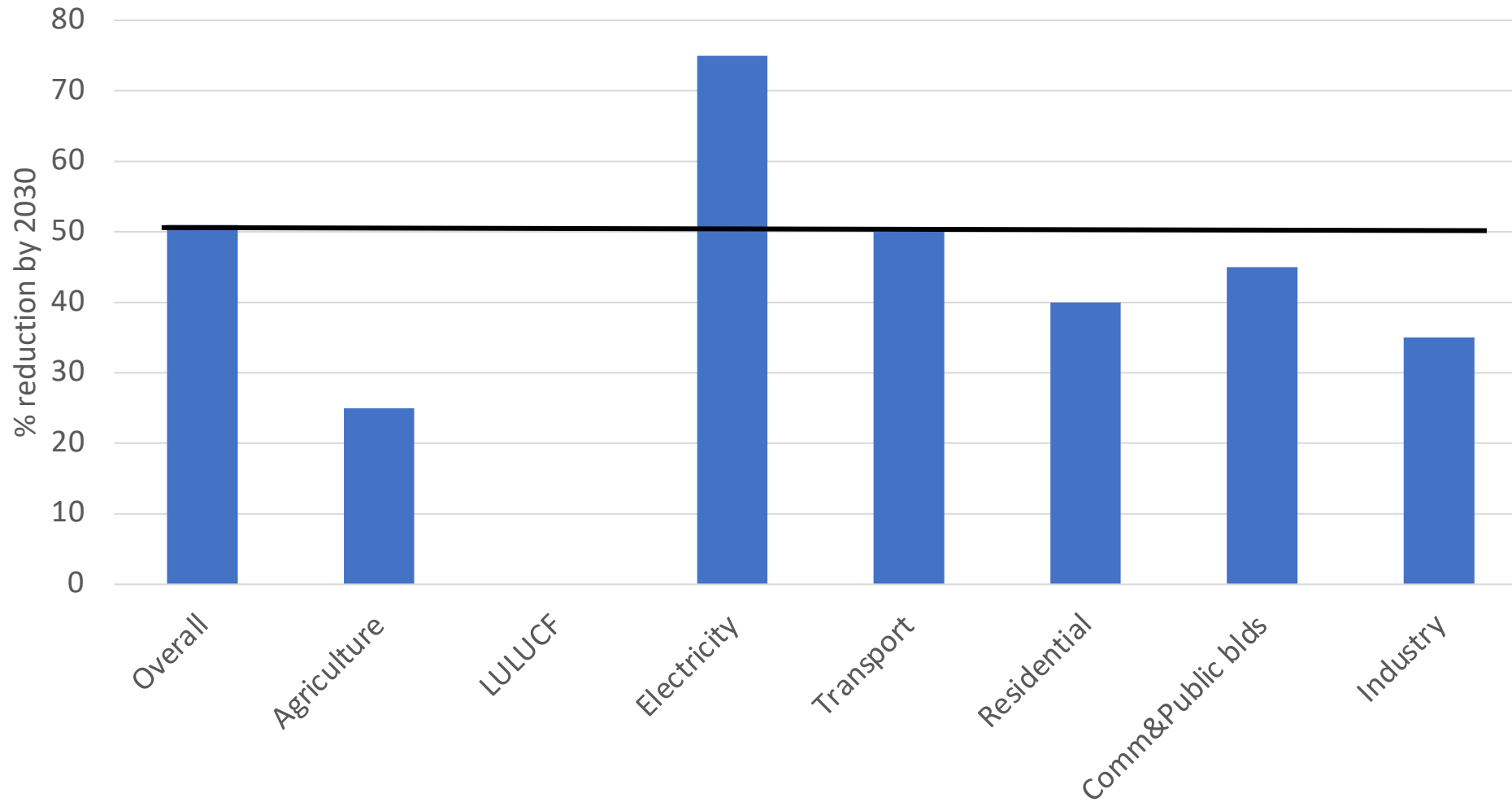


Recent evolution of Agricultural GHG emissions



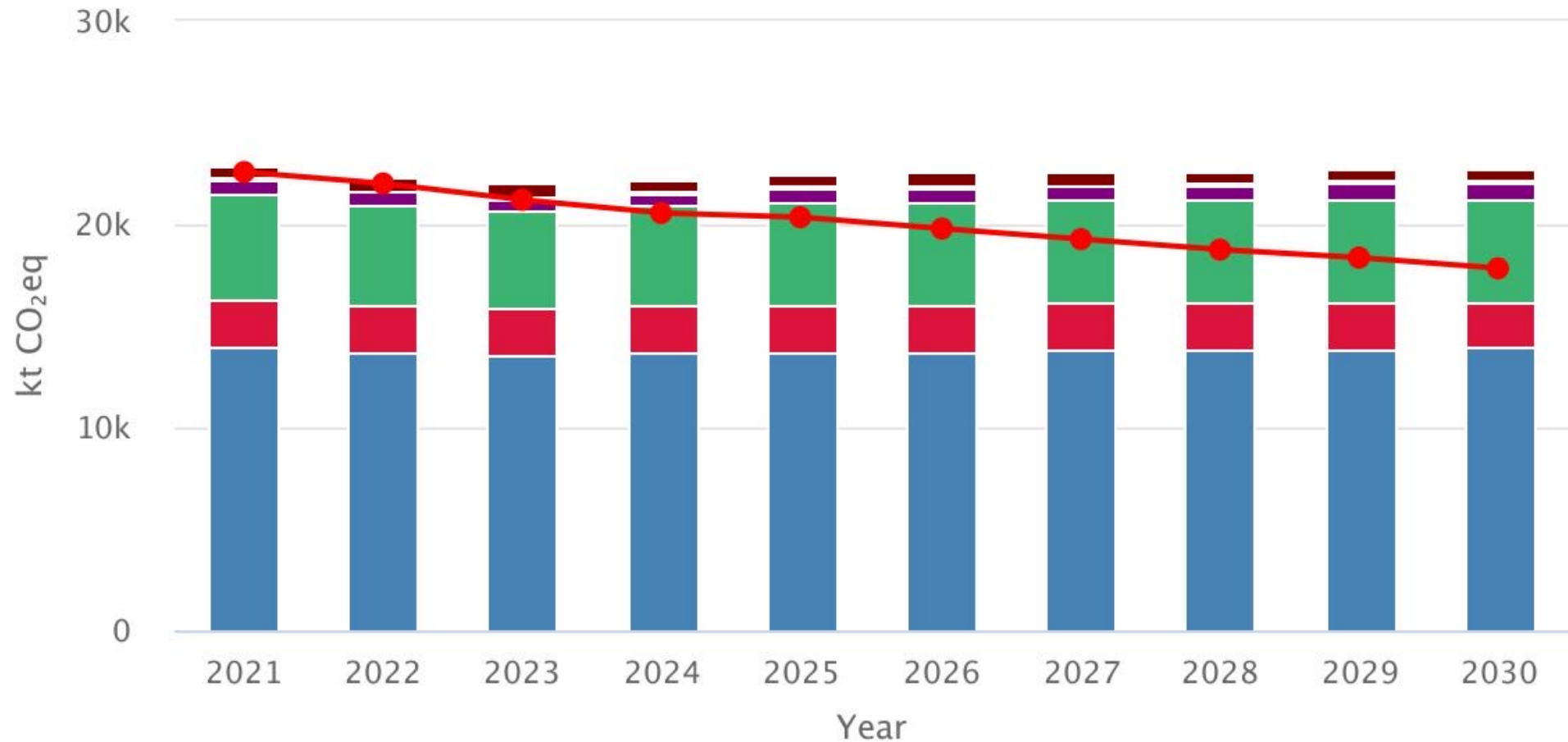
Sectoral targets (Climate Action Plan)

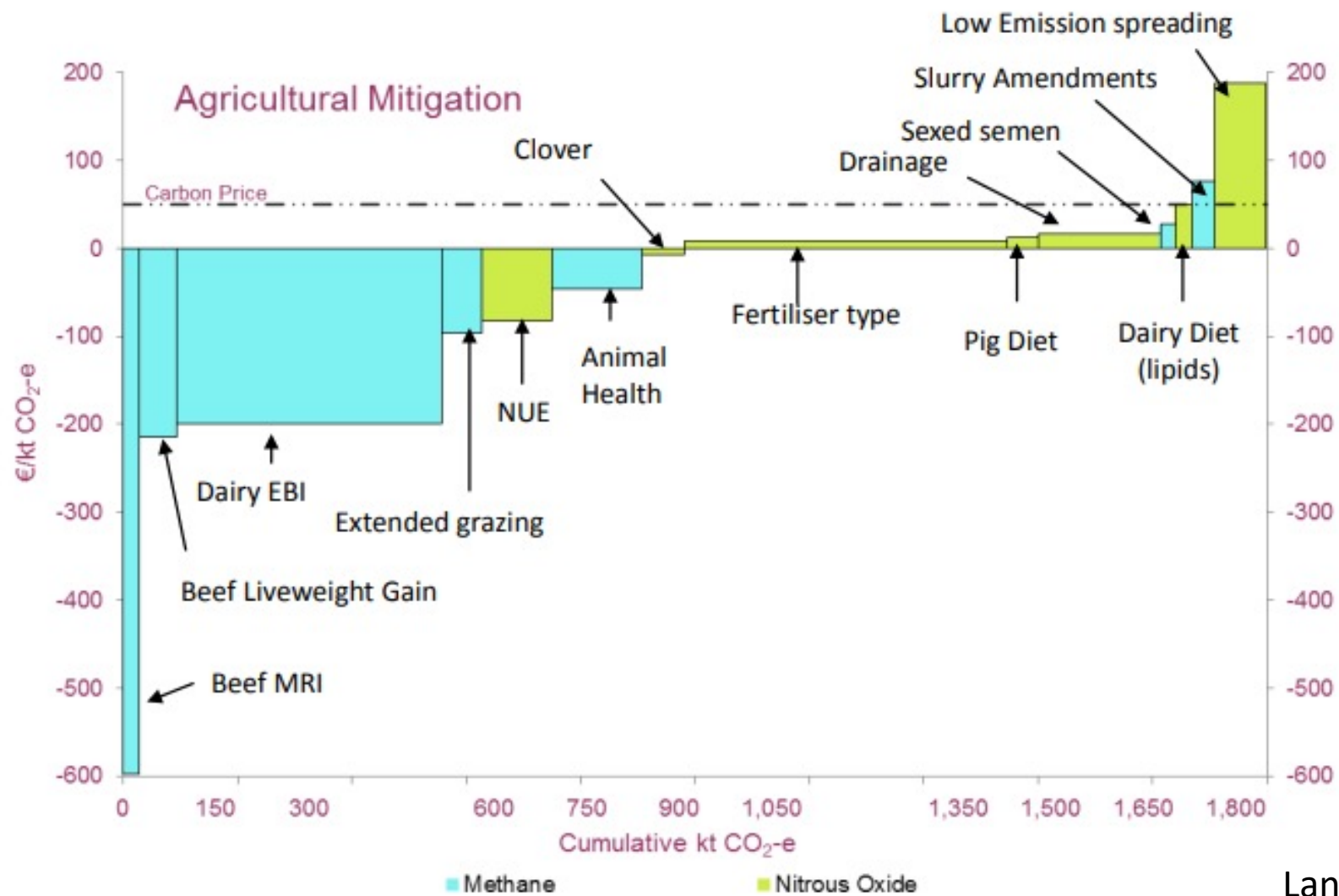
% reduction required by 2030, compared to 2018 as a baseline



Agriculture emissions
2018: 23 MT CO₂e
2030: 17.25 MT CO₂e

Agriculture projected emissions 2021-2030 (BAU)

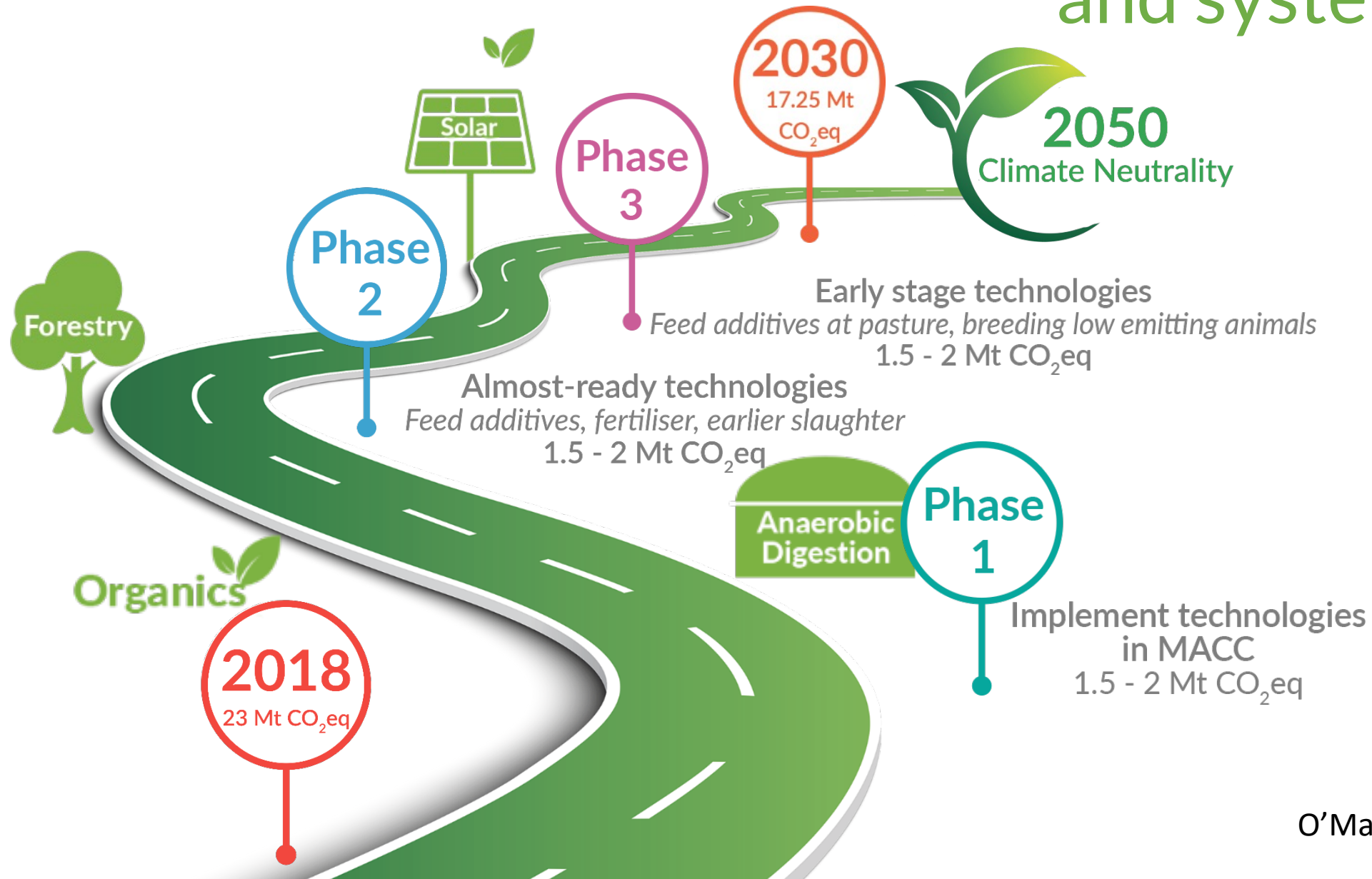




Lanigan et al. 2019

Marginal abatement cost curve (MACC)

Is there a roadmap through technology, efficiency and system change?



- Yes, it is possible
- It is very challenging
- Critical now to achieve phase 1
- **2 key challenges**
 - Develop more technologies
 - Support farmers with adoption

On farm carbon balance sheets

Sustainability digital platform

Carbon calculator and Decision Support Tool

Create farm carbon plan



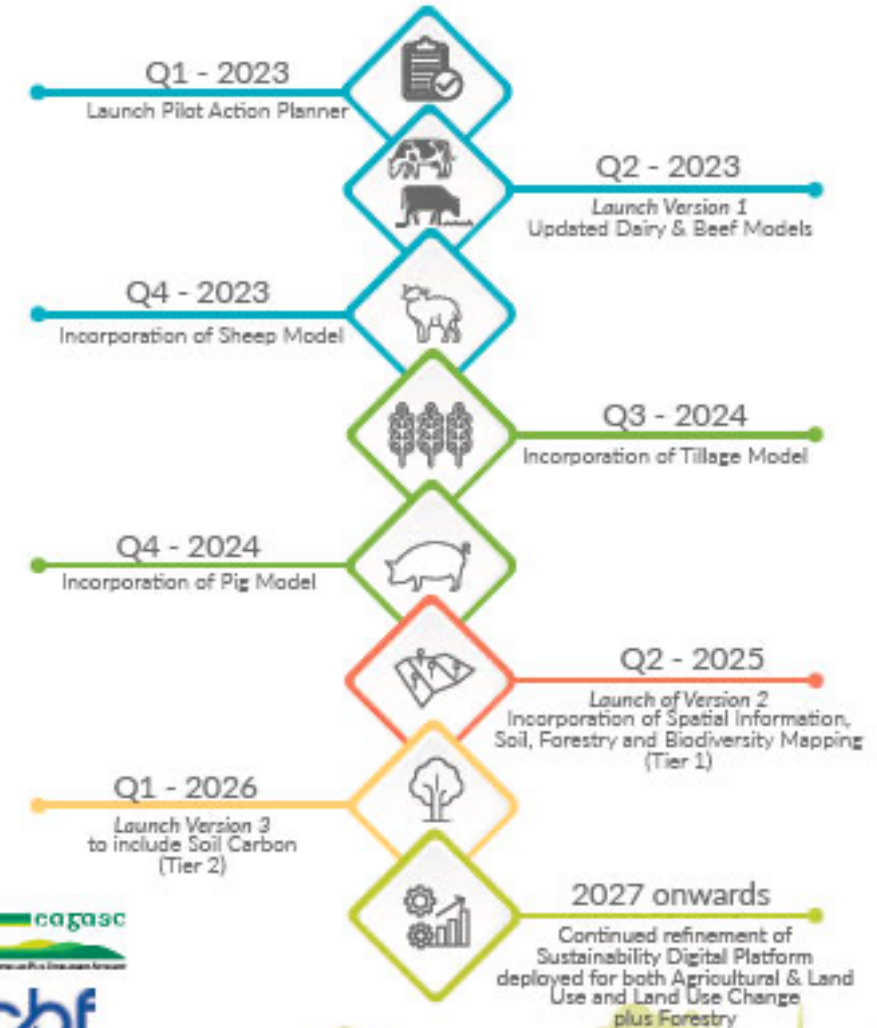
Measure whole farm data from multiple sources



Monitor progress & prepare for carbon farming

EU Carbon Farming proposals

By 2028, access to verified emission and removal data for all land managers



Thank you

Go raibh maith agat as d'aird agus
fáiltím roimh do cheisteanna



tommy.boland@ucd.ie



@Pallastb

