

# Reducing emissions in agriculture

Professor Frank O'Mara, Director Teagasc

Environment Ireland – Croke Park

15 September 2023



# Outline of presentation

- What's the target?
- What can be achieved – the MACC
- The Signpost programme - Supporting farmers to take climate action



# What is the target?

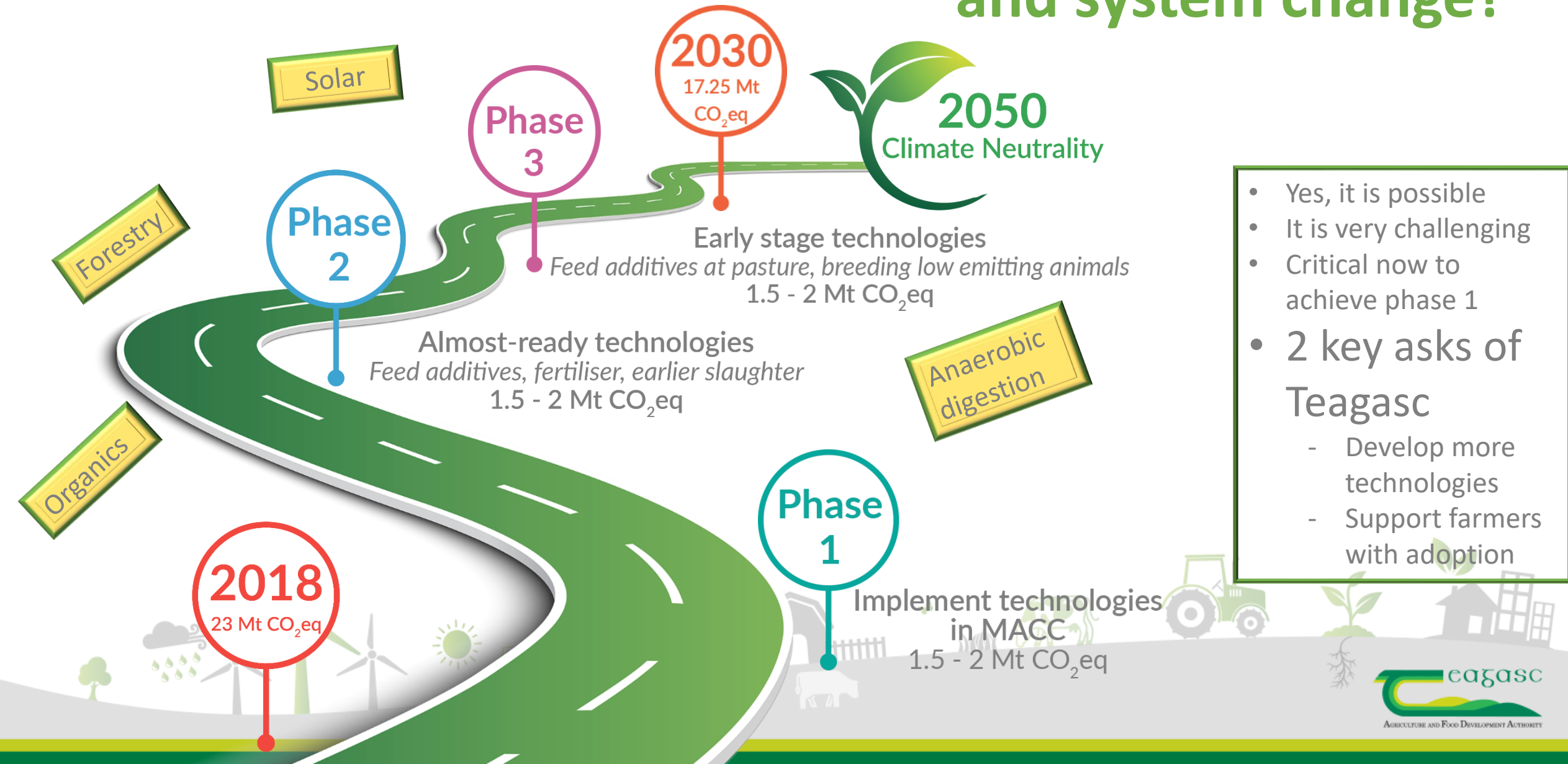
**51%**  
reduction  
in GHG Emissions  
↓  
**by 2030**

**25%**  
reduction  
in GHG Emissions  
↓  
**for agri sector  
by 2030**

Farmers need support  
at three levels



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



12 July 2023

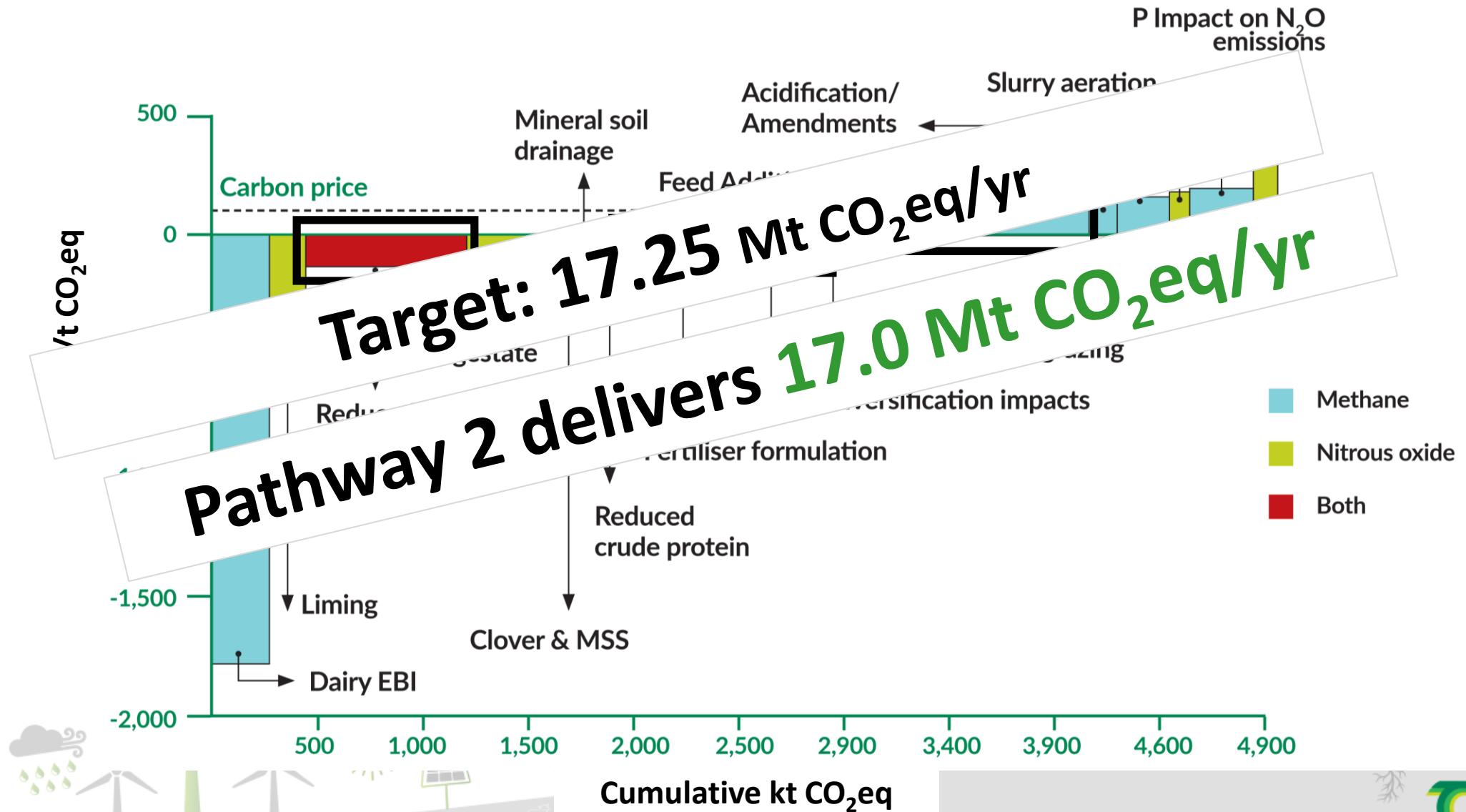
# Teagasc MACC 2023

An Updated Analysis of the Greenhouse Gas Abatement Potential of the Irish Agriculture and Land-Use Sectors between 2021 and 2030

Gary Lanigan<sup>1</sup>, Kevin Black<sup>2</sup>, Trevor Donnellan<sup>1</sup>, Paul Crosson<sup>1</sup>, Ciara Beausang<sup>1</sup>, Kevin Hanrahan<sup>1</sup>, Cathal Buckley<sup>1</sup>, Ben Lahart<sup>1</sup>, Jonathan Herron<sup>1</sup>, John Redmond<sup>3</sup>, Laurence Shalloo<sup>1</sup>, Dominika Krol<sup>1</sup>, Patrick Forrestal<sup>1</sup>, Niall Farrelly<sup>1</sup>, Donal O'Brien<sup>1</sup>, J.J. Lenehan<sup>1</sup>, Michael Hennessy<sup>1</sup>, Michael O'Donovan<sup>1</sup>, David Wall<sup>1</sup>, Lilian O'Sullivan<sup>1</sup>, Tom O'Dwyer<sup>1</sup>, Mike Dineen<sup>1</sup>, Sinead Waters<sup>1</sup>, Nuala NiFlahartha<sup>1</sup>, Pat Murphy<sup>1</sup>, John Spink<sup>1</sup>, Pat Dillon<sup>1</sup>, John Upton<sup>1</sup>, Karl Richards<sup>1</sup>



# Agriculture MACC (S1) – Pathway 2 = 4,858 kt CO<sub>2</sub>eq/yr



# The adoption rates are very challenging

Reduce nitrogen fertiliser use by 30%

Protected urea constitutes 95% of straight fertiliser nitrogen

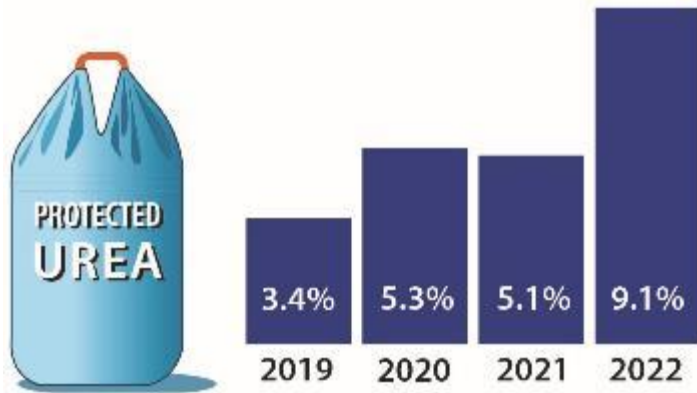
Average age at finish of beef cattle reduced by 3 months

Feed additives fed to 50% of dairy cows during grazing and 65% of housed cattle

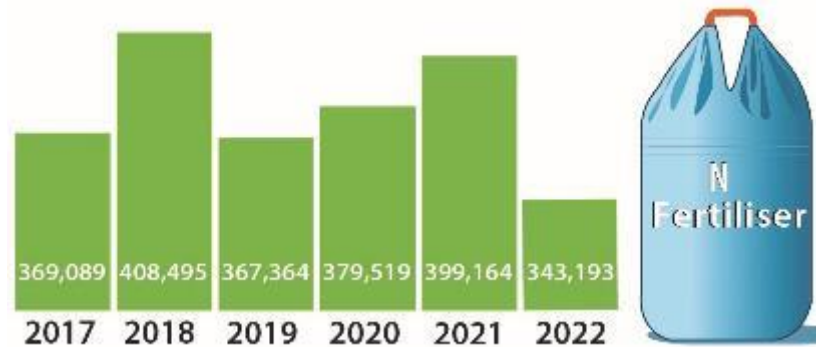


# How are we doing so far?

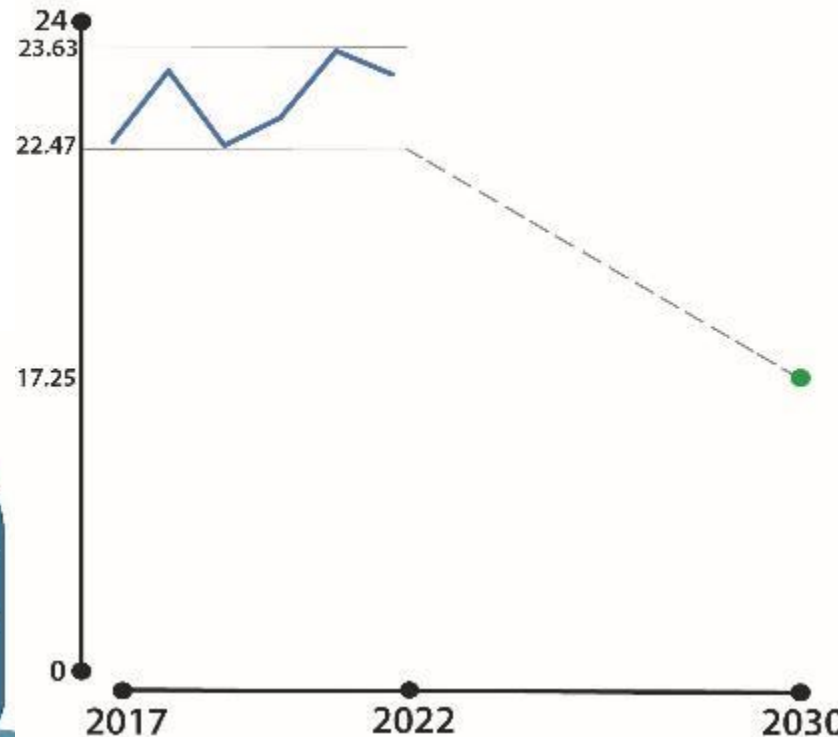
Protected urea sales as % of overall fertiliser N sales (DAFM)



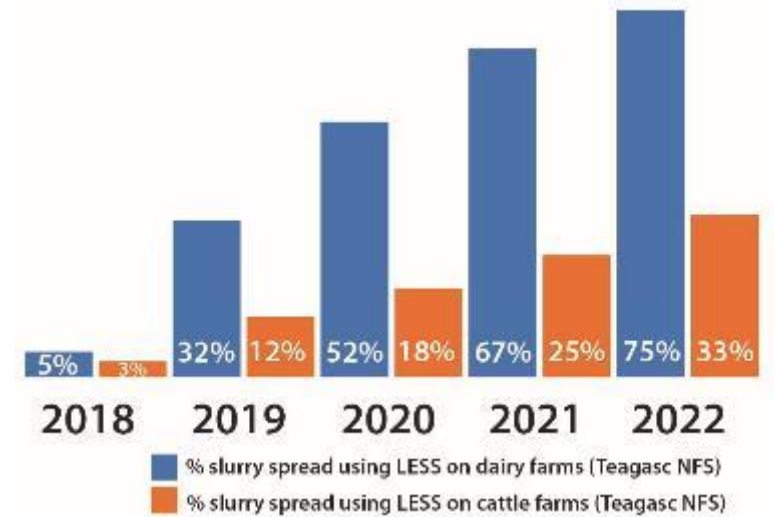
Annual N fertiliser sales (tonnes, CSO)



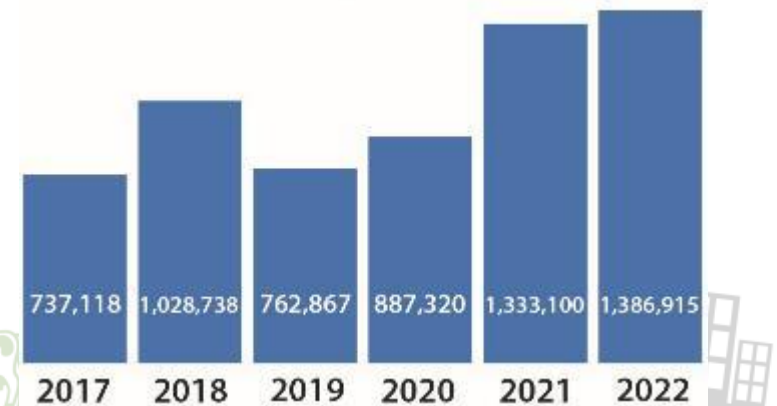
Agricultural GHG emissions (MtCO<sub>2</sub>e, EPA)



% slurry spread using LESS on Cattle and Dairy farms (Teagasc NFS)



Lime sales (tonnes, CSO)





We are not in a bad place – we just  
need to accelerate the rate of  
improvement

How can we do that?



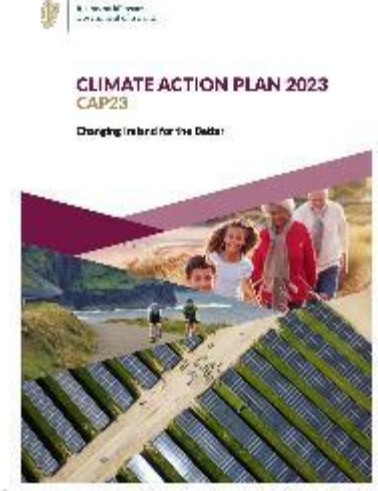
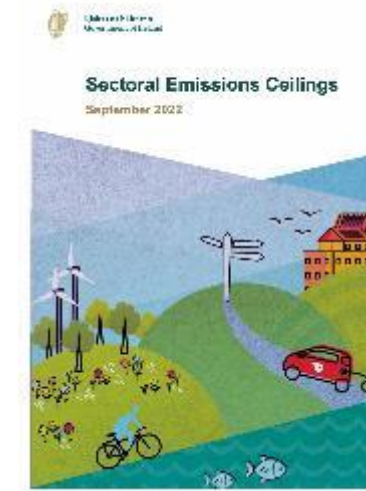


# Policy drives change



Number 32 of 2021

Climate Action and Low Carbon Development (Amendment) Act 2021



# But there are other levers of change also

Research



Incentives



Farmers need support  
at three levels



Advisory Services/  
Education



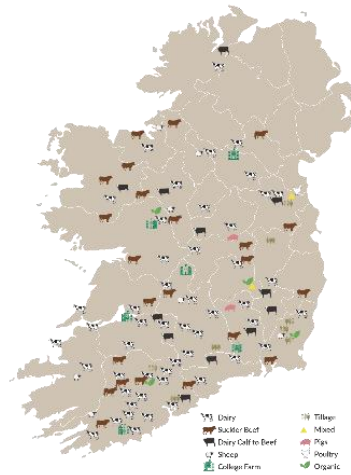
Penalties



# Signpost Advisory Programme



120 Farmers  
Signpost Demonstration Farmers



# Signpost Advisory Programme



Available to all farmers



Enhanced advisory & training support



“Know My Number – Make My Plan”  
- supported by the Sustainability Digital Platform



Engage with 50,000 farmers between now & 2030

Registration & Commitment

Know My Number

Make My Plan

Support for Action  
(3 year programme)

Emissions Reduction





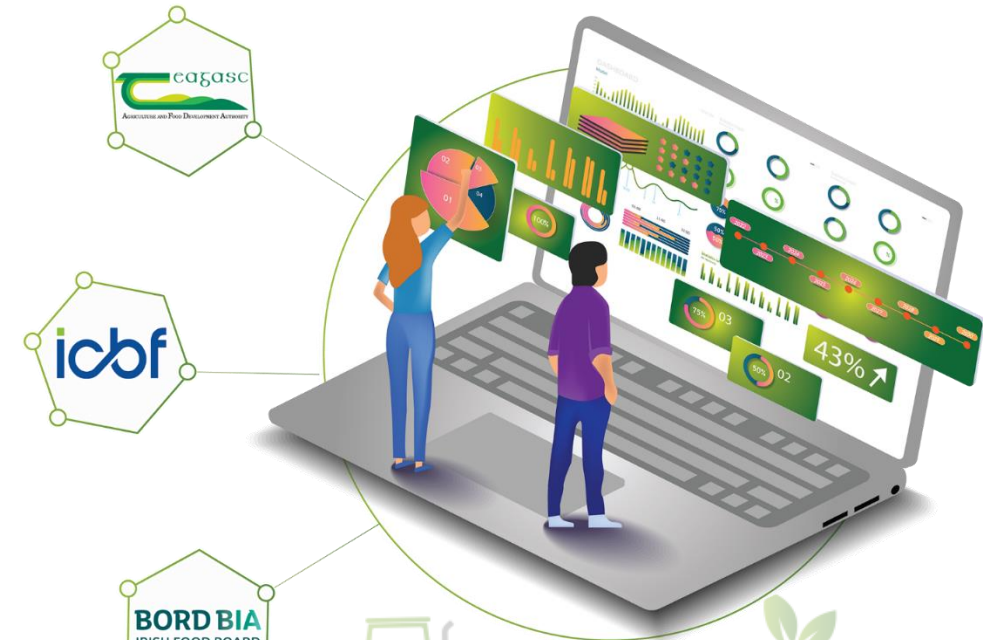
# Engagement with individual farmers crucial

## Phase One: 21 Signpost Advisors recruited



# Sustainability Digital Platform → AgNav


- Unique, secure online platform
- Allow farmers count carbon emissions (& sequestration) on farm
- Decision support capability
  - Tailored sustainability plans
  - Track progress







Sign into your account

 IE

6 .....

Login







Trusted Solutions, For Everyday Farming



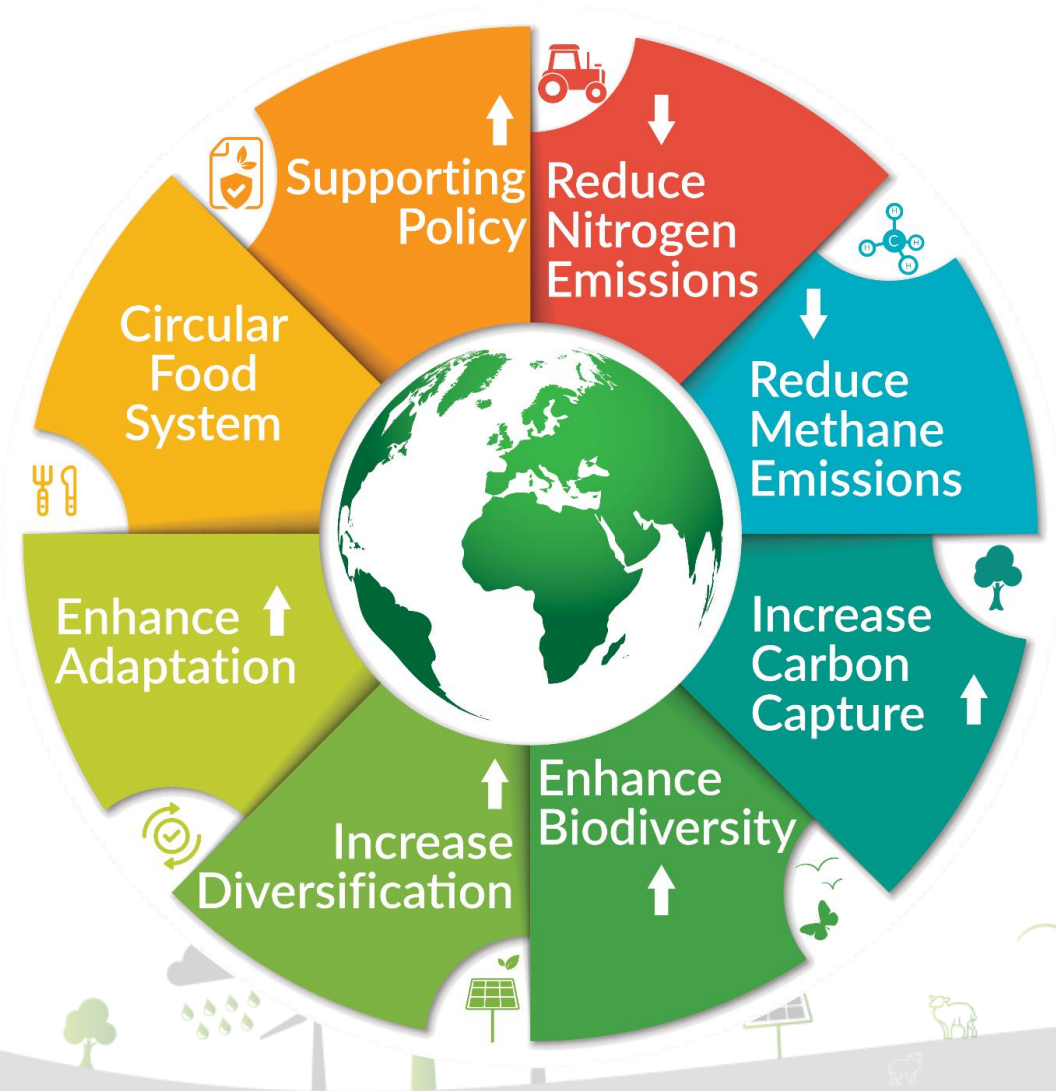
# Recruiting farmers

- Farmers are already engaging
- Farmers with a large footprint
- Existing discussion groups
- Existing relationships

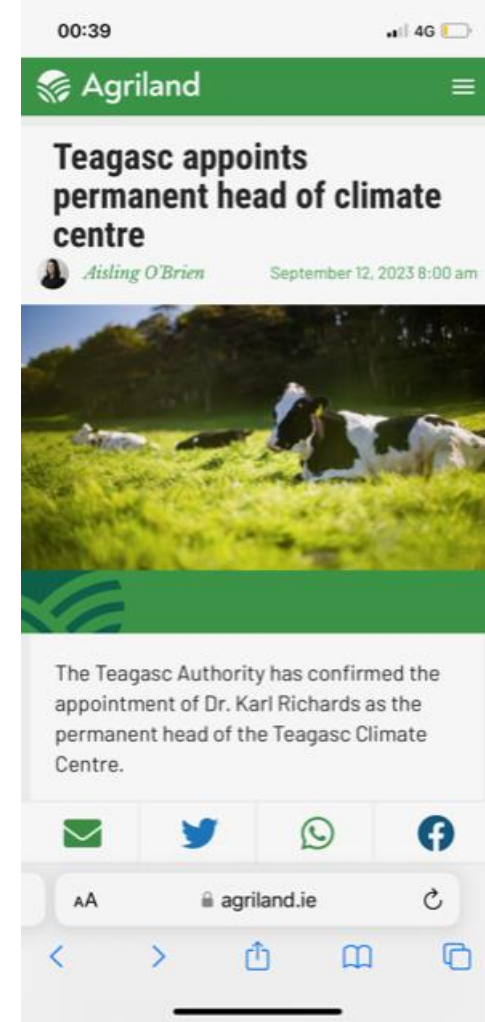




# Teagasc Climate Centre



- National focal point
- Increase Teagasc capacity
- Greater cooperation across Teagasc
- Inform national policy
- National & international collaboration
- Greater efficiency



# Building on investments in facilities and equipment



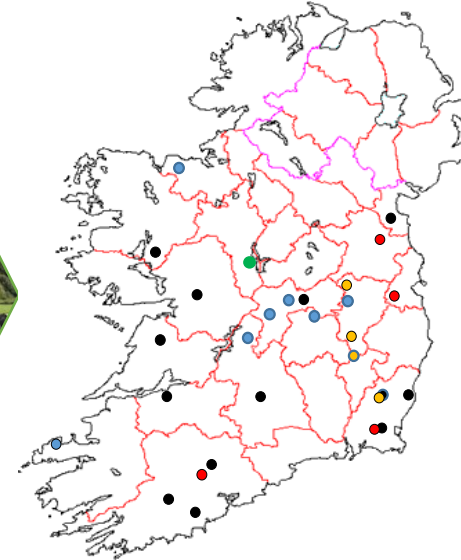
An Roinn Talmhaíochta,  
Bia agus Mara  
Department of Agriculture,  
Food and the Marine



€12.7m investment in  
labs and facilities in  
Teagasc, Johnstown  
Castle



NASCO: **N**ational **A**gric  
**S**oil **C**arbon **O**bservatory  
will have 30 flux towers



36 Greenfeeds in  
Ireland between  
Teagasc, ICBF and UCD



# Next steps

- Support farmers to develop and implement a plan
- Accelerate research to bring 'nearly ready' technologies to point of deployment and develop new ones
- Continue to improve the national inventory (how we count agric emissions)
- Continue to reduce uncertainty in LULUCF (land-based) emissions and sequestration

