GRA Country Updates - Ireland

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The Challenges

- Industry expanding to meet global food demand
- GHG and ammonia emissions increased since 2011
  - 33% greenhouse gas emissions
  - 98% ammonia emissions

Agricultural GHG 2030 targets:

- Reduce emissions ~10% (17.5 -19Mt CO_2e)
- Deliver carbon sequestration ~ 10% (2.7 MT CO_2e)

Ammonia targets:

- 1% reduction 2020-30
- 5% from 2030 onwards

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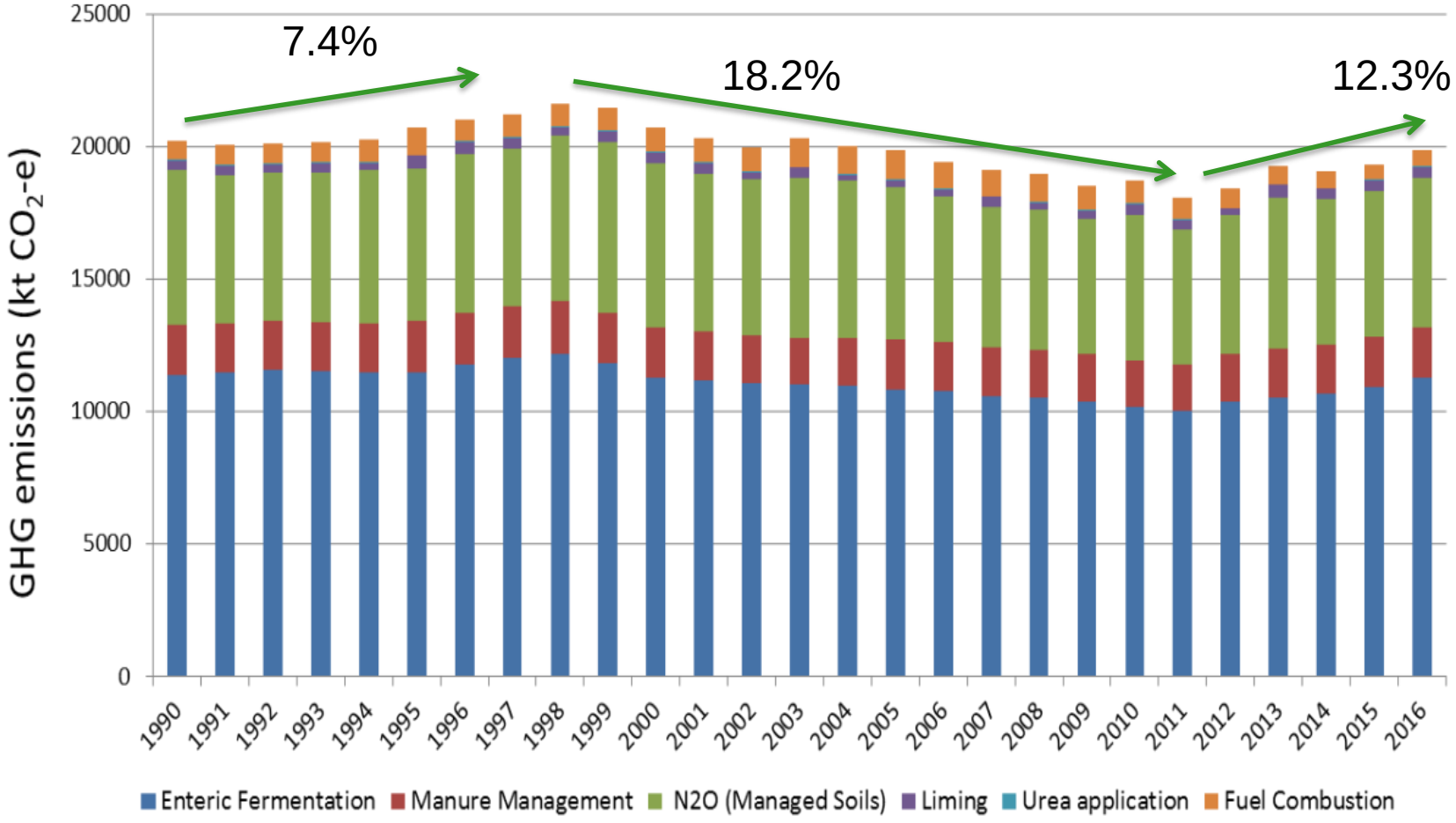
Agriculture GHG emissions profile



- Methane from EF and manure management comprise 66% and Nitrous oxide 32% of sectoral emissions
- Cattle account for 88.7 % of methane emissions and 90% of N_2O emissions

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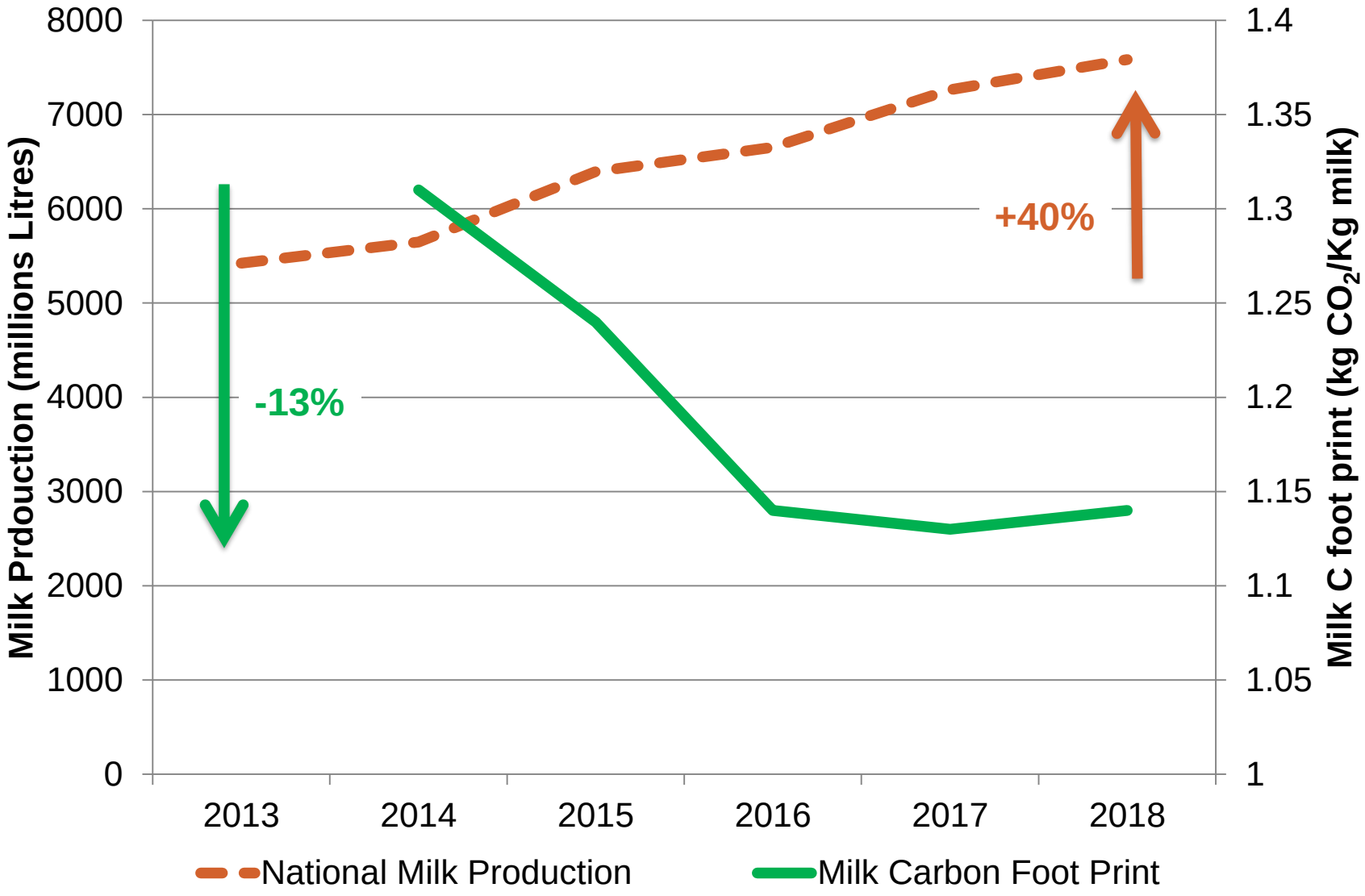
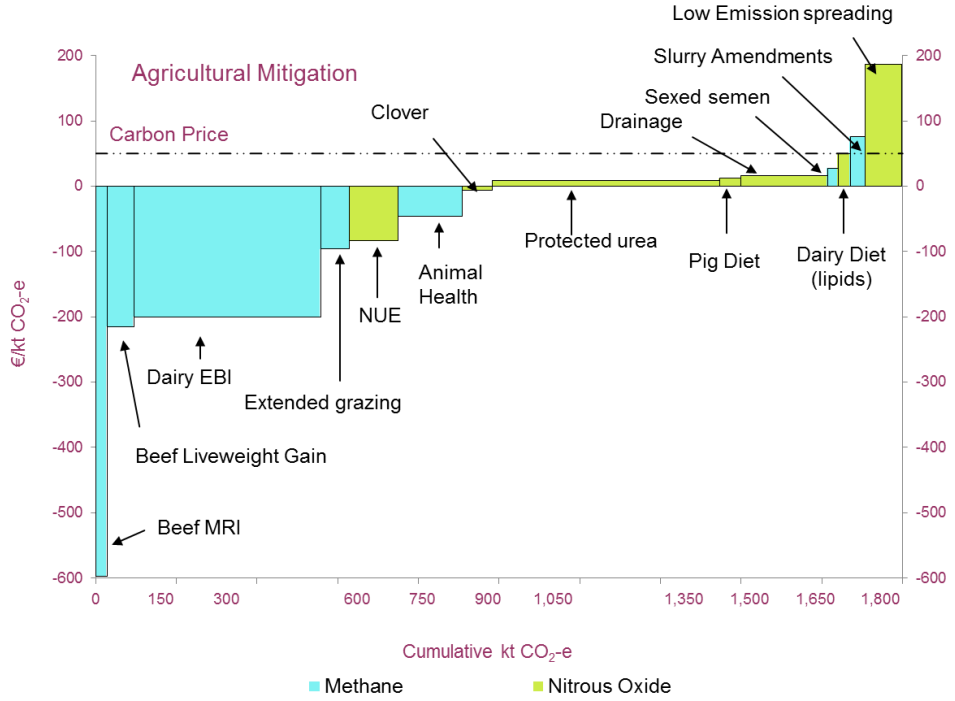
Dairy Expansion

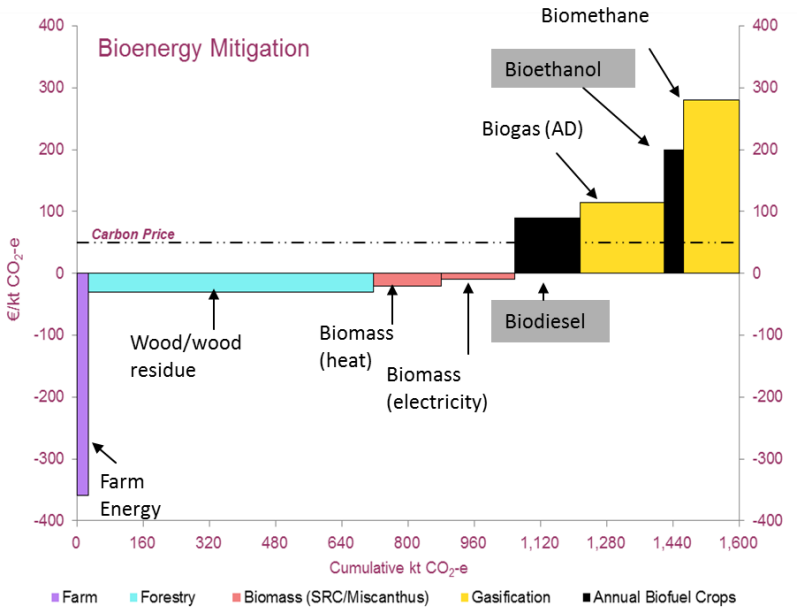


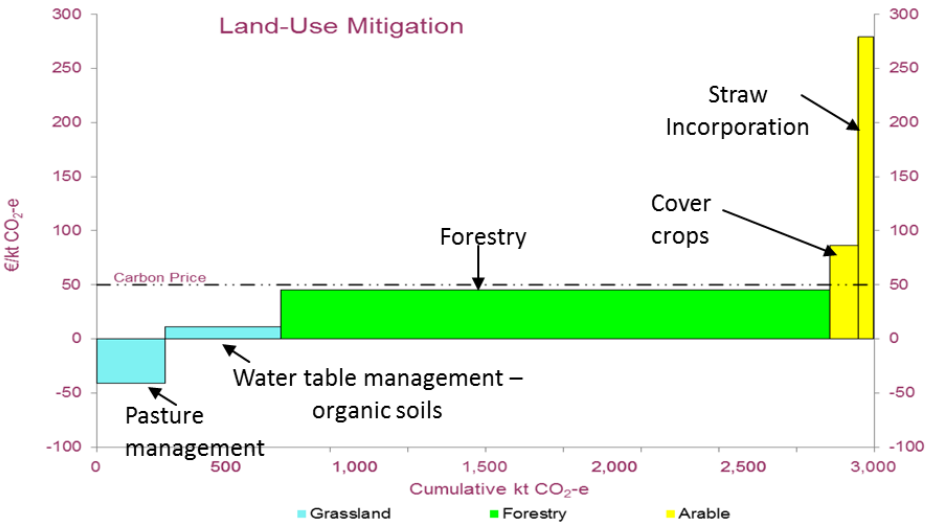
C.S.O.

National Farm Survey

Updated Marginal Abatement Cost Curve







Gary J. Lanigan & Trevor Donnellan (eds.) *An Analysis of Abatement Potential of Greenhouse Gas Emissions in Irish Agriculture 2021-2030. Teagasc, Oak Park, Carlow. June 2018*

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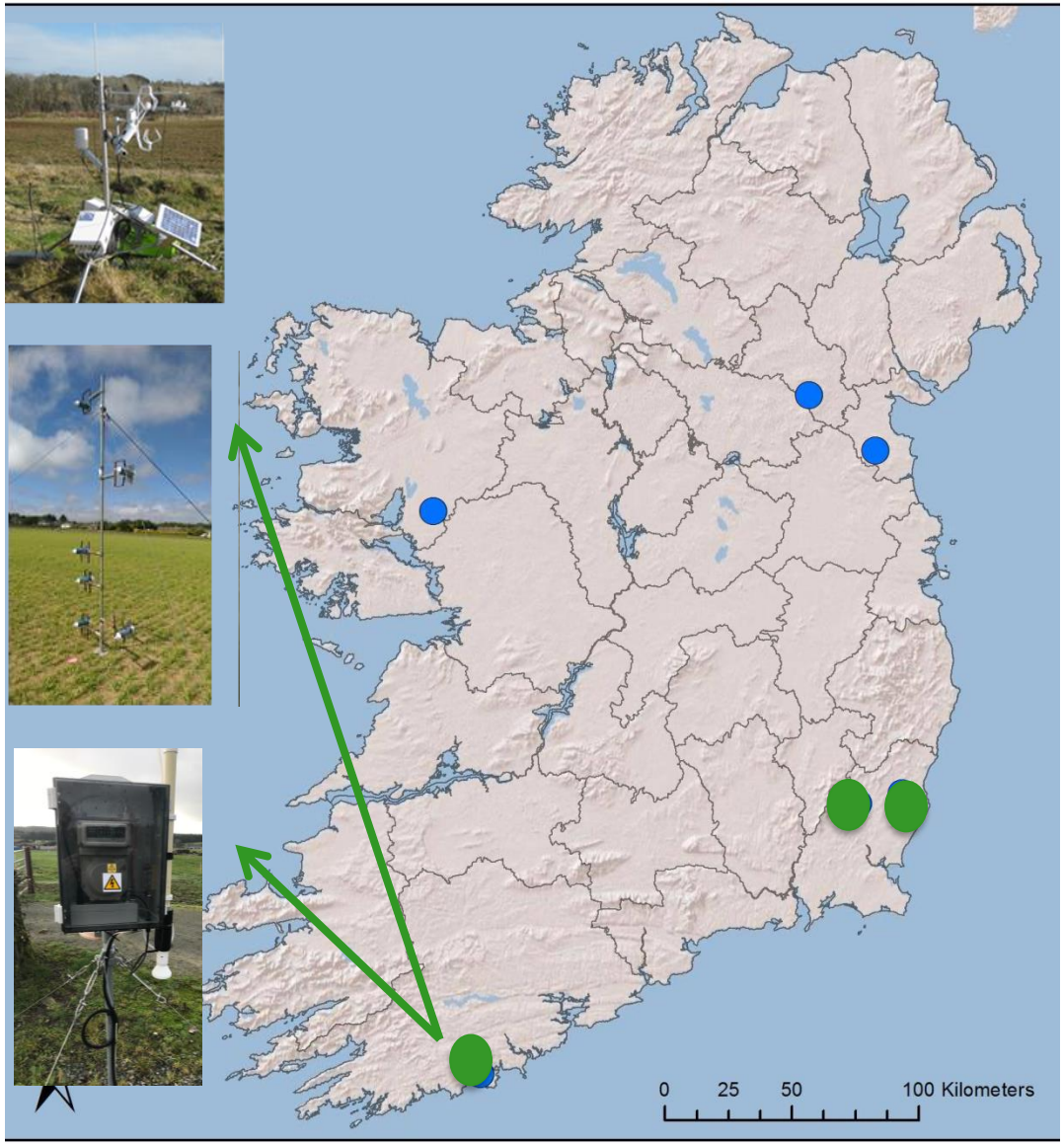
Agricultural Catchments Programme



Expanded - Gaseous Emissions

- All sites modelled GHG and NH_3 using inventory and models
- NH_3 measured in all catchments

- Measurement sites
  - Eddy covariance CO_2/CH_4
- Carbon sequestration quantified

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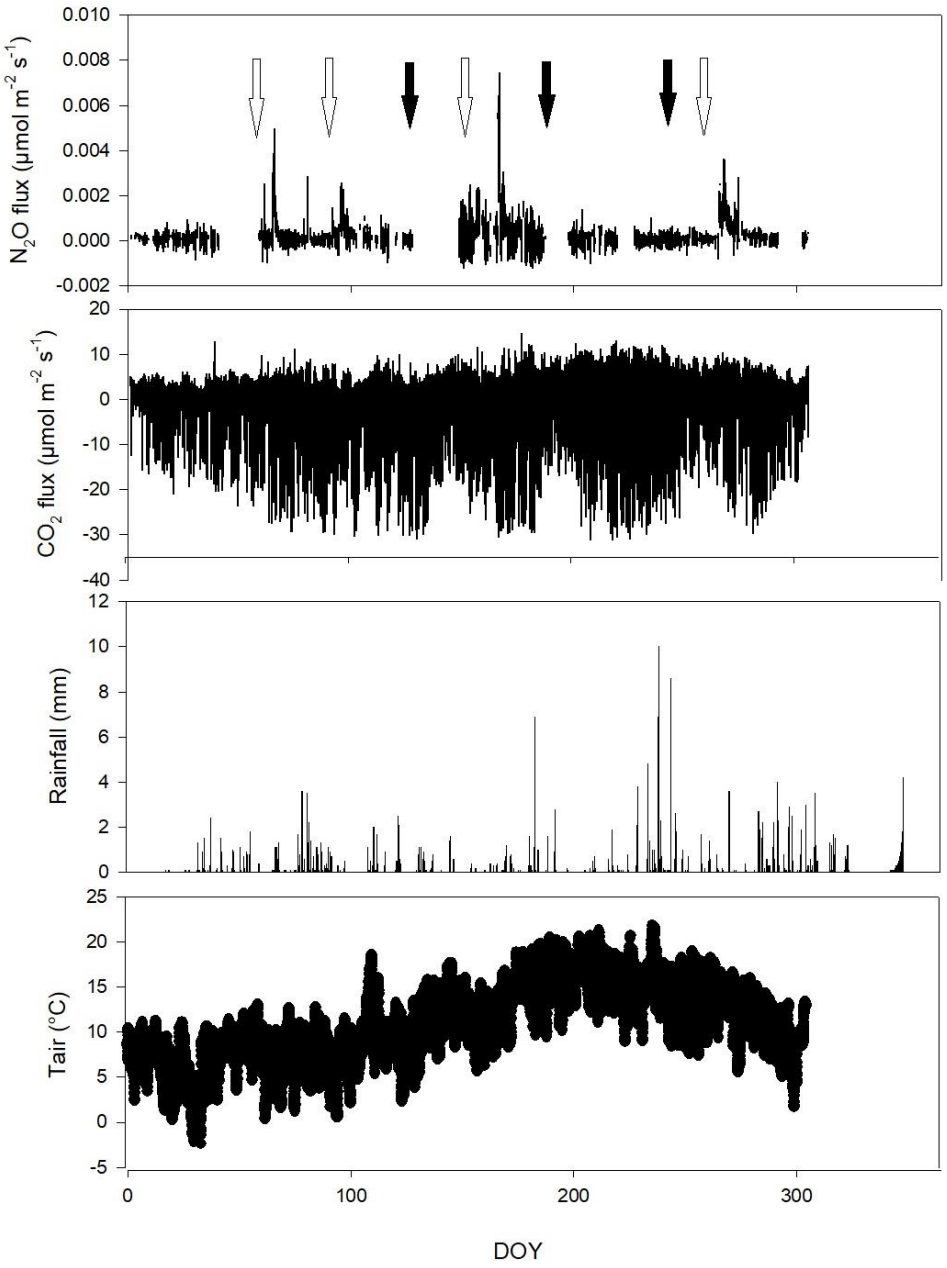
Agricultural Catchments Programme



Towards an Agricultural Greenhouse Gas Research & Innovation Centre

Overall objective: To scope the future agricultural GHG research and capacity requirements in Ireland as well as the optimum means of delivery in order to meet the challenge of reducing on-farm GHG emissions.

1. Assess current resources and capacity available,
2. Identify scientific research, extension and implementation priorities
3. Identify gaps in terms of research capacity, resources and expertise.
4. Recommend future agricultural GHG research structures & funding models

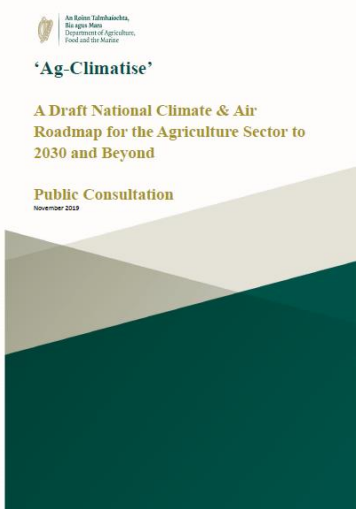


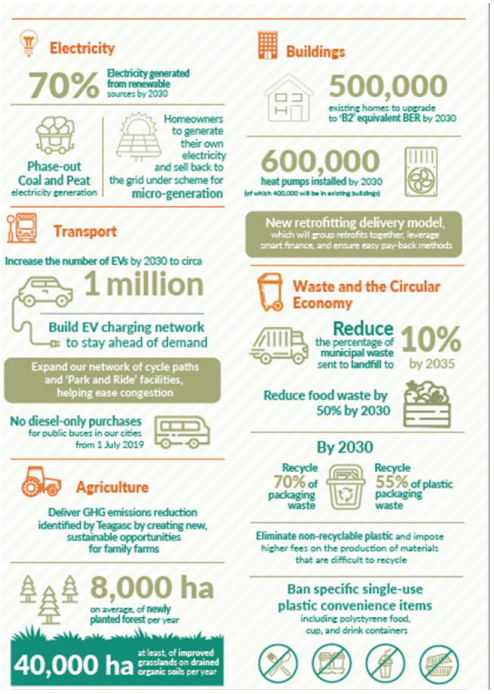


Policy/Regulation Developments

Policy

- Climate Action Plan
  - Prime ministers office
  - Sectorial targets
  - Deliver the MACC
  - Centre of Excellence
- Ag-Climatise
  - Public consultation
  - CAP Roadmap
- Nitrates Derogation Review





https://www.dccae.gov.ie/en-ie/climate-action/publications/Pages/Climate-Action-Plan.aspx

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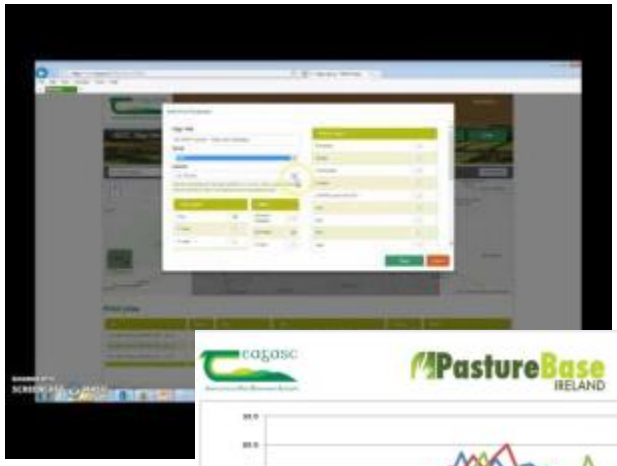
Knowledge transfer

- Better farms

BETTER FARM BEEF CHALLENGE

  - NMP online

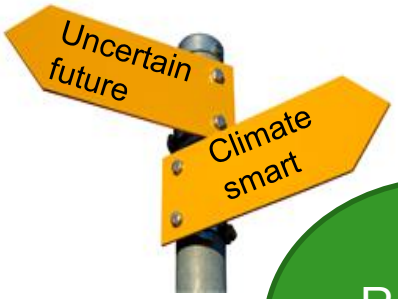


  - PastureBase

  - Carbon navigator

Signpost Demo Farms

c75 farms to work out issues with implementation of MACC measures
Used as signposts to all farmers on how to move towards Climate Smart farming



Living lab

Real life setting

Multiple stakeholders:
Farmers
Industry
Res/Adv

Co-creation

Active user involvement

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Current National Actions

Industry

- Dairy sustainability Forum
- Sign-Post farms
- Sustainability Bonus

Policy

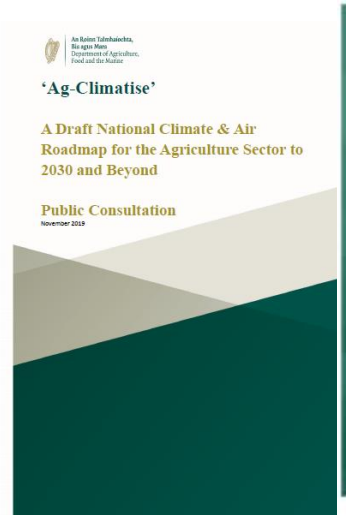
- Climate Action Plan
- Ag-Climatise
- Nitrates Derogation Review

Research

- Excellence
- ACP expansion
- Abatement and C sequestration

Dairy Sustainability Ireland

Origin Green IRELAND



World-class Research

AGRICULTURAL CATCHMENTS PROGRAMME

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Summary

- Greenhouse gas emissions increasing
  - Mainly due to increased dairy production
- Significant mitigation potential exists
  - But these exist on paper only
  - Significant communication and action required
  - Particularly at farm level to realise these emissions reductions
  - Behavioural change a significant challenge
- National climate action plan
  - Monitored by prime minister office
  - Implementation of mitigation measures
  - Review of nitrate derogation regulations

THANK YOU FOR YOUR ATTENTION





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Further Reading

- Gary J. Lanigan & Trevor Donnellan (eds.) *An Analysis of Abatement Potential of Greenhouse Gas Emissions in Irish Agriculture 2021-2030*. *Teagasc, Oak Park, Carlow. June 2018*

- Donnellan, T., Hanrahan, K and Lanigan G.J. *Future Scenarios for Irish Agriculture: Implications for Greenhouse Gas and Ammonia Emissions*. *Teagasc, Athenry. June 2018*

- *https://www.dccae.gov.ie/en-ie/climate-action/publications/Pages/Climate-Action-Plan.aspxAg-*

- *Ag-Climatise* https://www.agriculture.gov.ie/ruralenvironmentsustainability/climatechangebioenergybiodiversity/ag-climatiseadraftnationalclimateairroadmapfortheagriculturesectorto2030andbeyondpublicconsultation/

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