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Update on cover cropping in the Agricultural Catchments Programme and impact of Farming for Water EIP

National Tillage Conference 2025

Wednesday, 29th January | Lyrath Hotel, Kilkenny

www.teagasc.ie/tillagecon25

Introduction

- 58% of river sites nationally have High-Good status for nitrate concentrations; however, 42% have unsatisfactory nitrate concentrations (EPA, 2024).
- The SE region has had the highest nitrate concentrations associated with agriculture coupled with freely draining soils and lower effective rainfall (EPA, 2024).
- The Agricultural Catchments Programme (ACP) was established in 2008 to evaluate Ireland's Nitrates Action Plan (NAP).
- Castledockrell, arable dominant catchment, has an average N concentration in its river, at 6.98 mg/l nitrate-N.

Introduction

- Overwinter cover crops are effective at reducing N leaching (Premrov *et al.*, 2014).
- Farmers have been sowing as part of GLAS, ACRES & voluntary
- Catch/ cover crops is a measure in the Farming for Water EIP



Agricultural Catchments Programme

Nutrient Transfer Continuum

Source

Mobilisation

Delivery

Impact



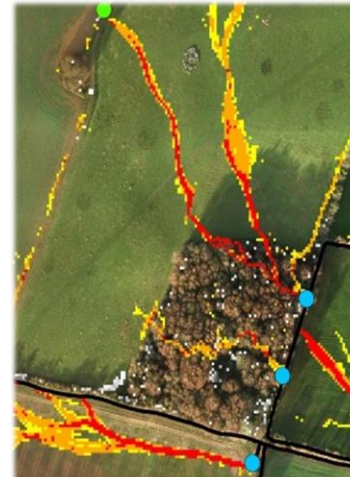
Nutrient management



Soil sampling



Weather



Surface pathways



Below ground pathways

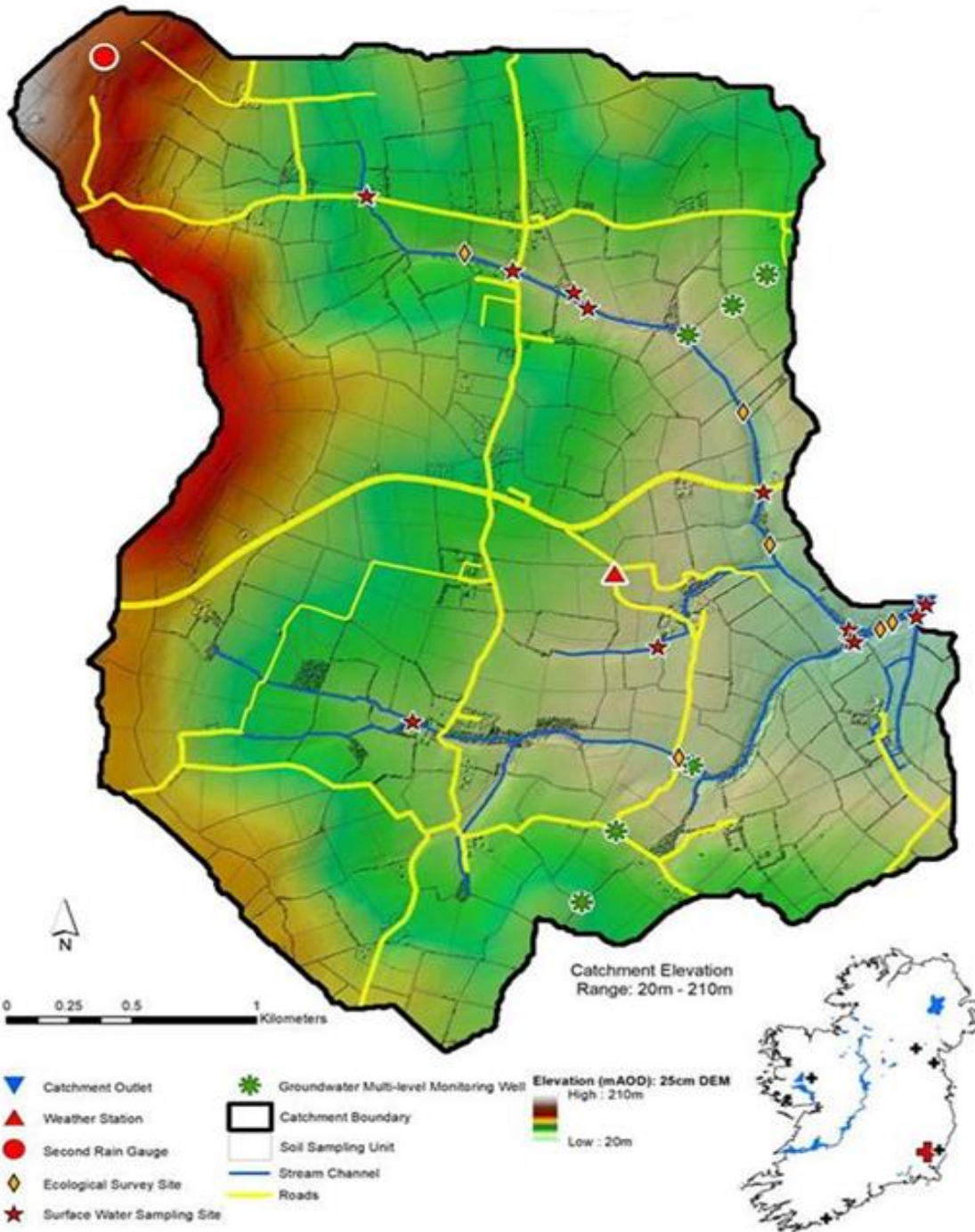


Water quality/ quantity



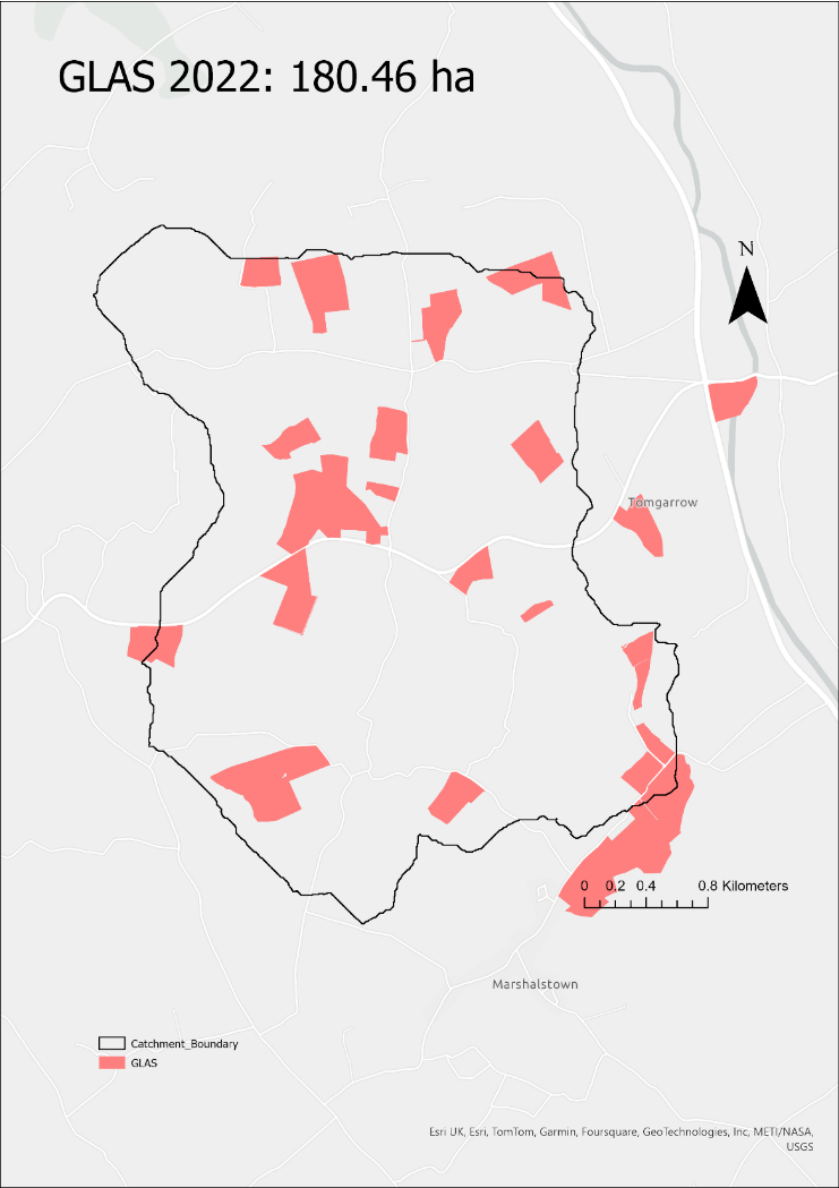
Ecological survey

Agricultural Catchments Programme

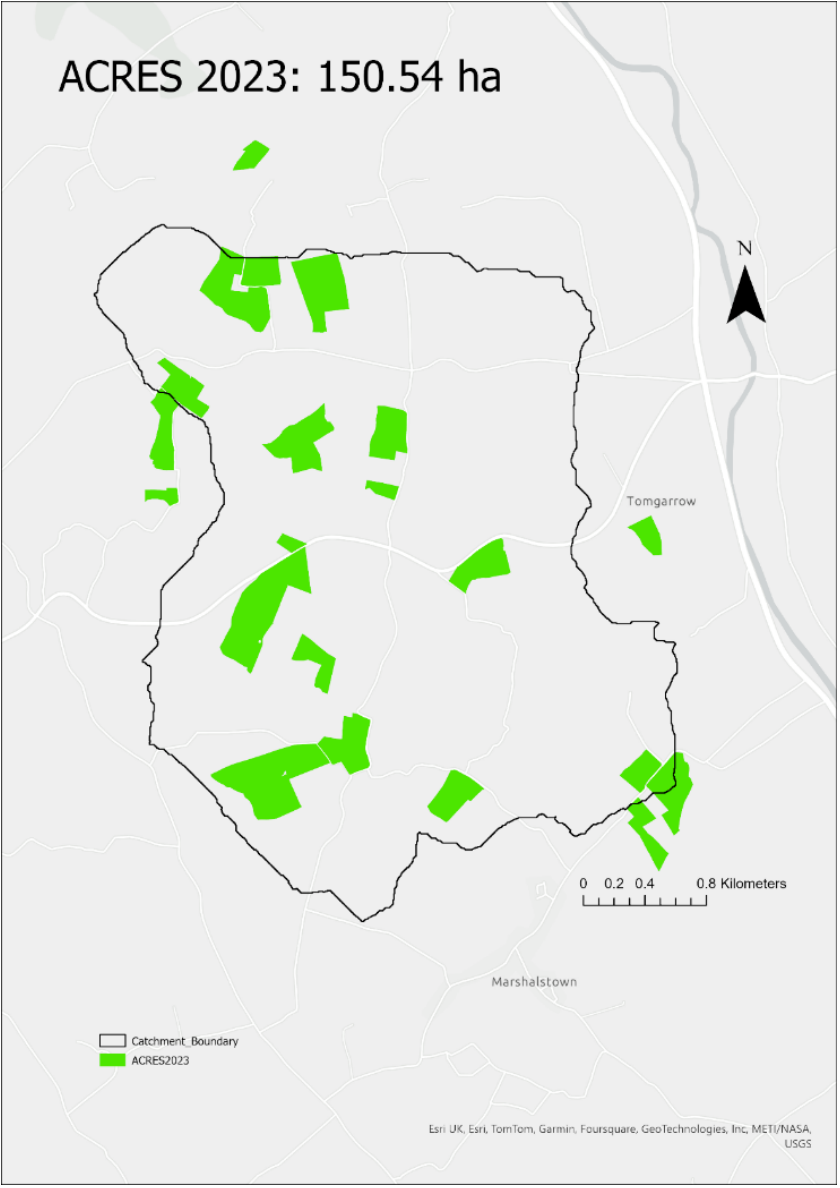


Cover crop area sown via GLAS & ACRES

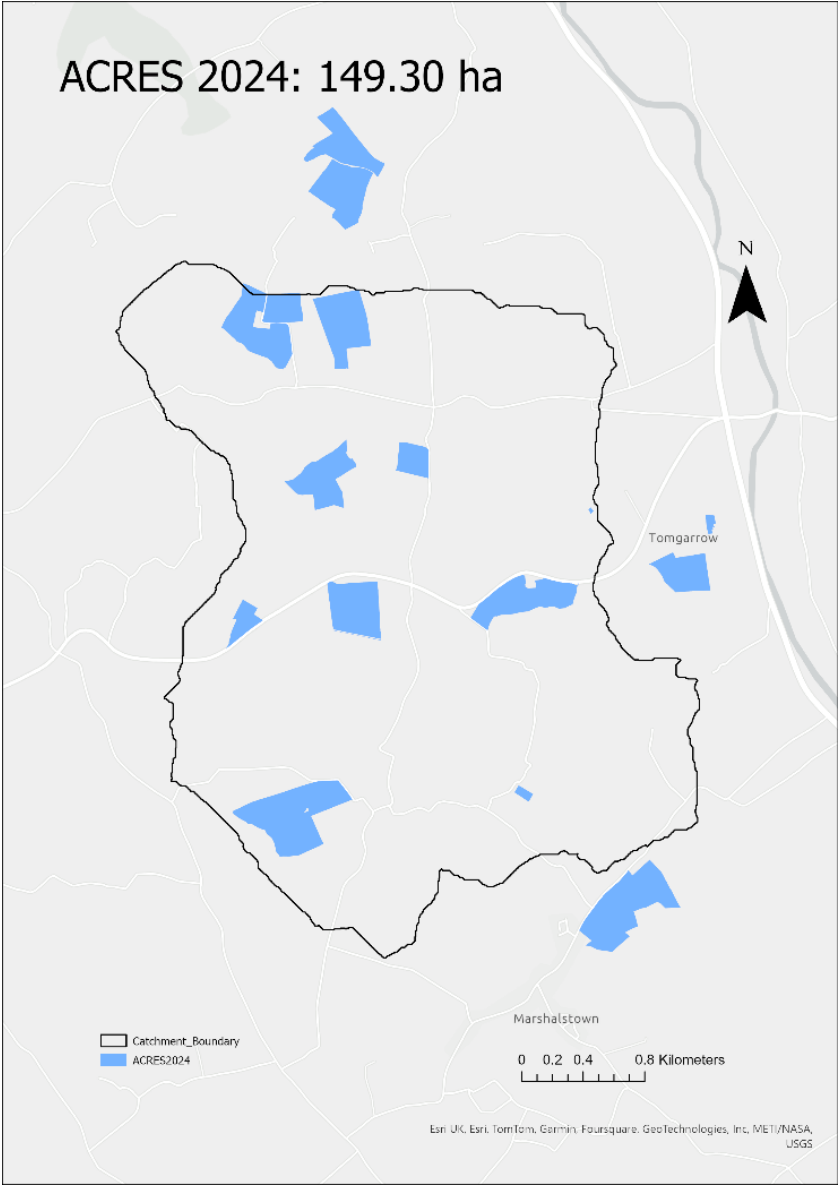
GLAS 2022: 180.46 ha



ACRES 2023: 150.54 ha

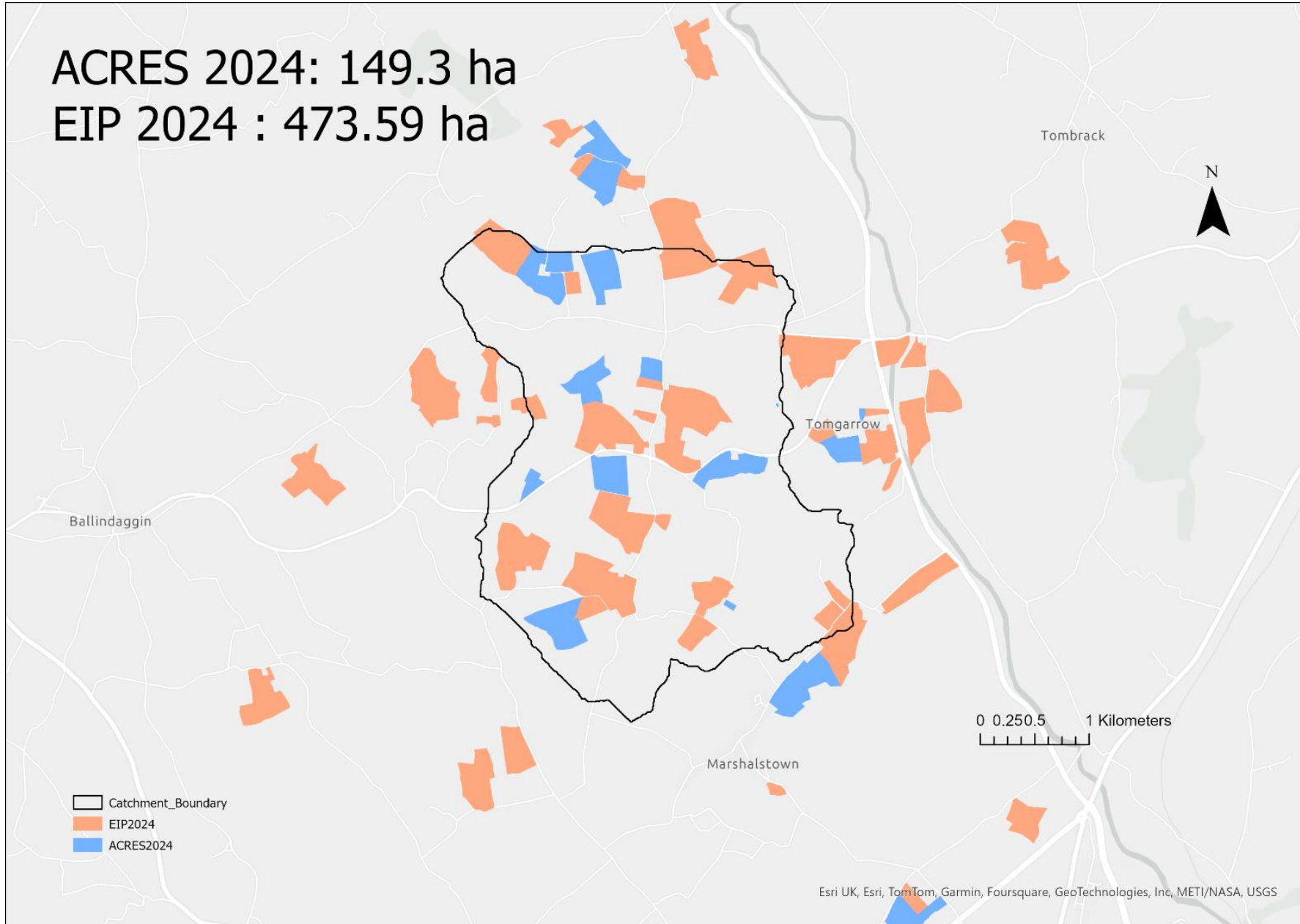


ACRES 2024: 149.30 ha



Cover crop area sown in via ACRES 2024 and Farming for Water EIP

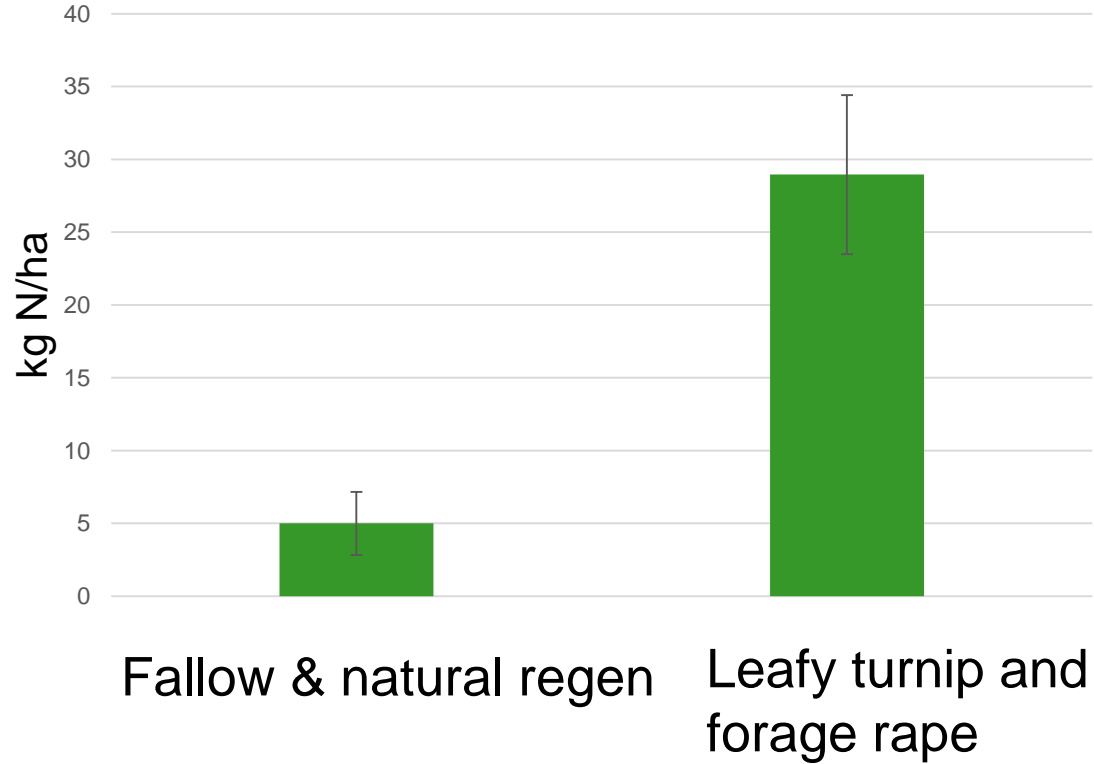
ACRES 2024: 149.3 ha
EIP 2024 : 473.59 ha



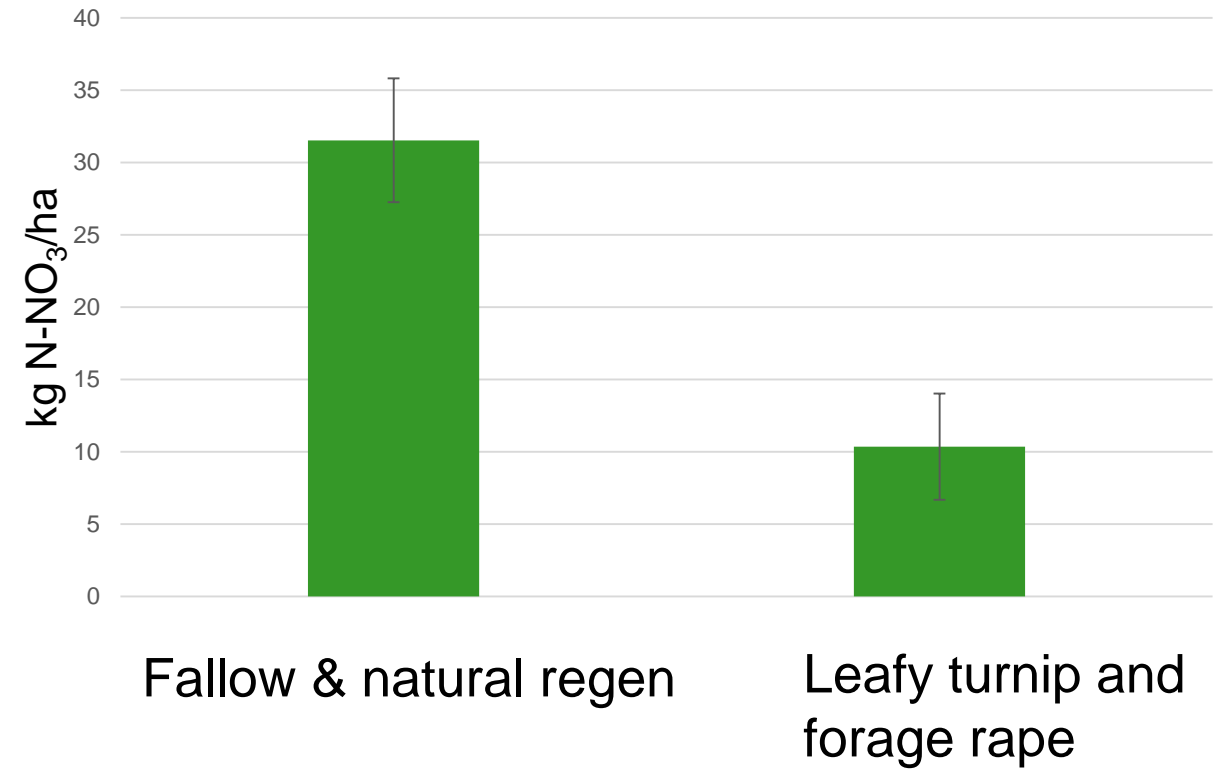
- Area within / on the catchment boundary increased by 87% in 2024
- Farming for Water EIP available for the next 3 years up to the end of 2027

Nitrate-N leaching study

Biomass N uptake

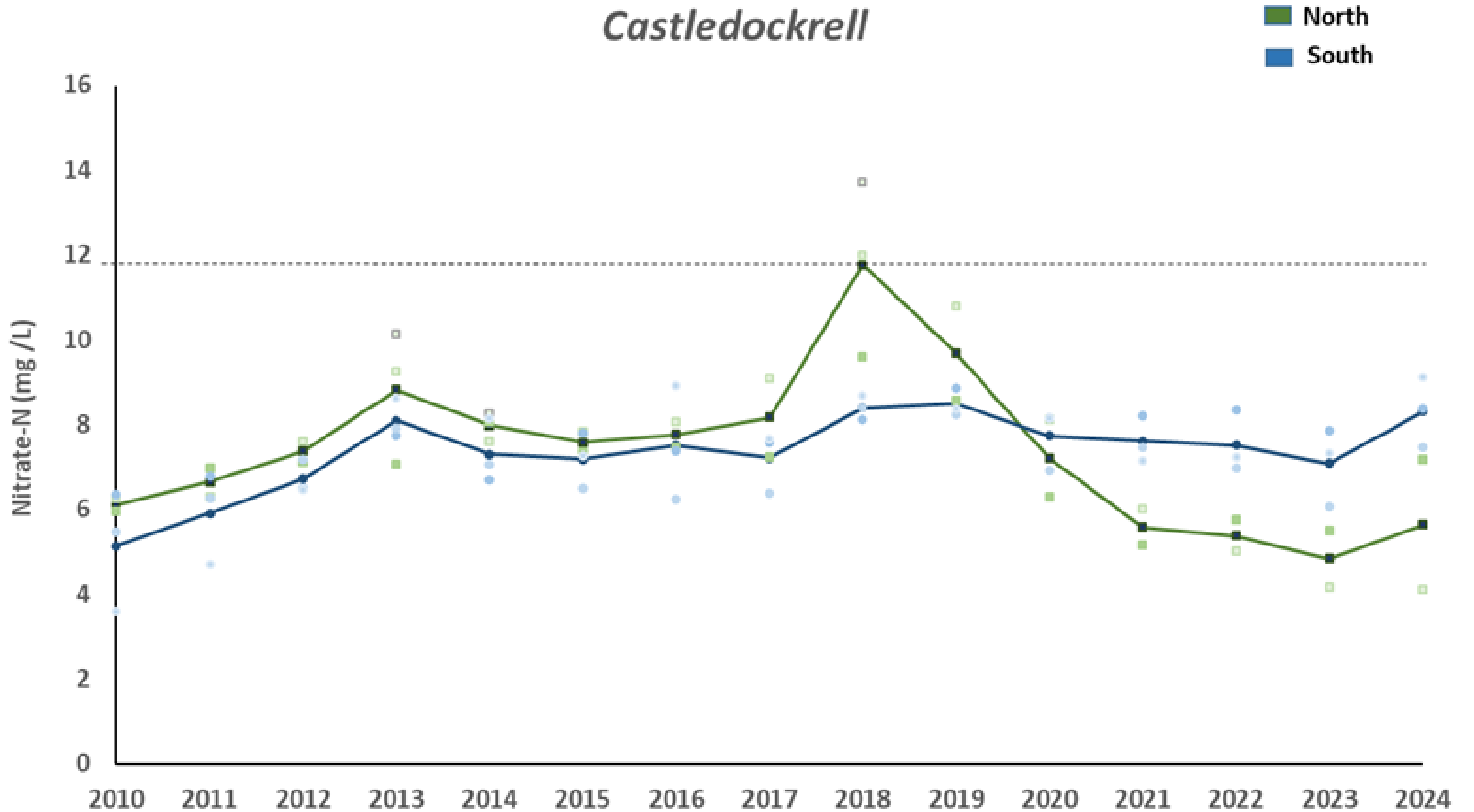


Nitrate leaching losses

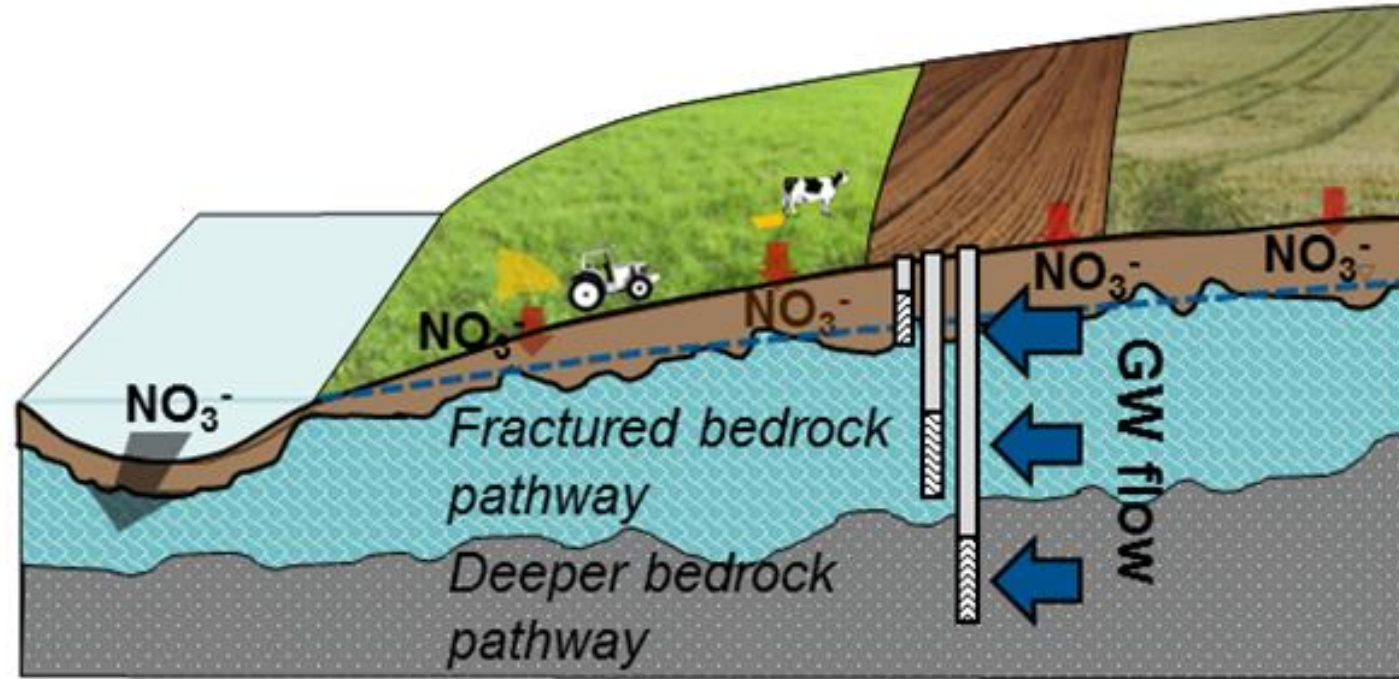
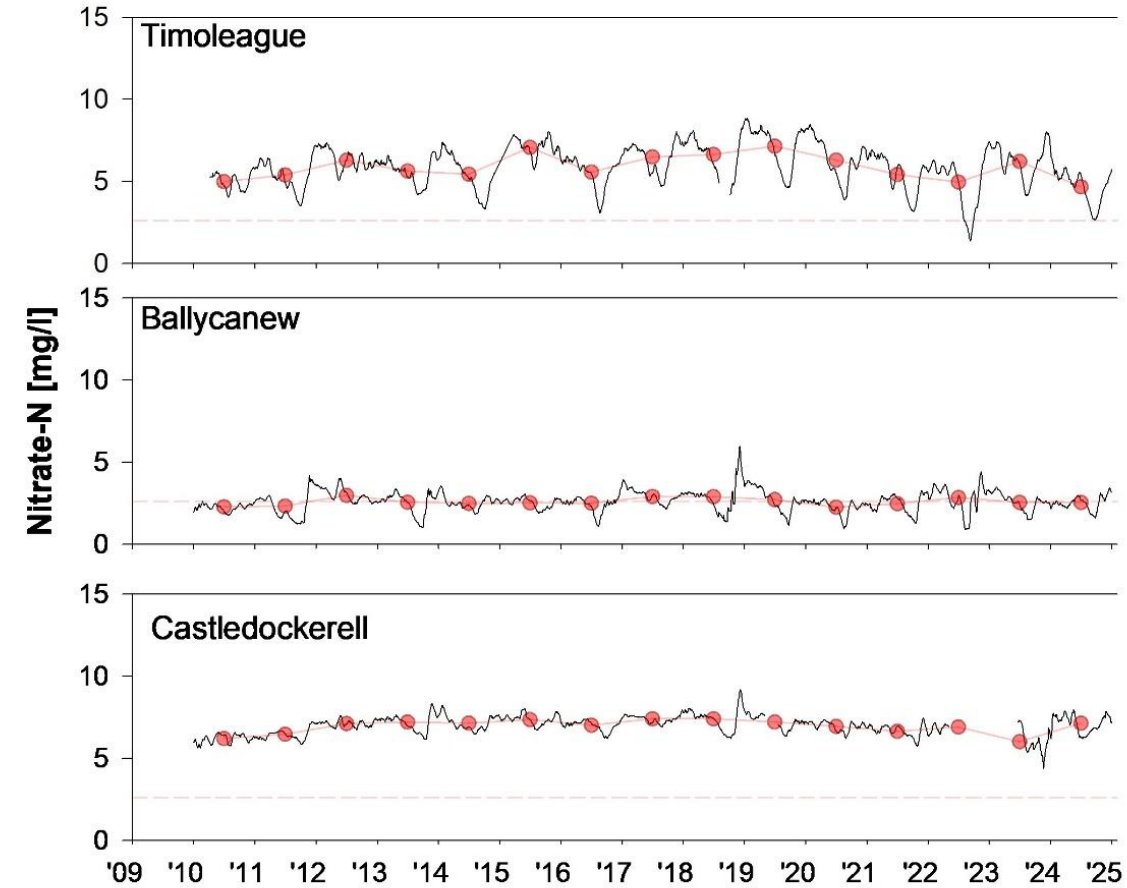


Nitrate-N concentration in groundwater

Castledockrell



Nitrate N – catchment scale



- Need consecutive years of good cover crop area to make an impact at river water scale.

Take home messages

- Sown cover crops can significantly reduce N loss
- Early sowing is important
- Plant species inclusion important
- Increase in area sown in 2024 – funding available up to 2027
- Catch crops viewed positively by farmers - motivated by impact on soil health and structure
- Importance of participatory approaches – discussion groups and demonstrations and farm walks
- Cross industry level collaboration important

Acknowledgements

- The Agricultural Catchments Programme farmers
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 - Eoghan O'Brien

