



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



Ireland's European Structural and
Investment Funds Programmes
2014-2020

Co-funded by the Irish Government
and the European Union

On-Farm Actions to Improve Water Quality in the Mulkear Catchment

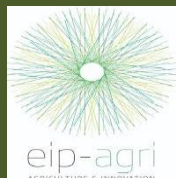
Mulkear EIP
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25/02/2022 Mulkear EIP©

Project Background

- Commenced in 2019 - 5 years
- Funding European Innovation Partnership (EIP)
- Funding €1.17m (2019 – 2023)
- Board
 - Steering & Advisory Panel (SAP)
 - Operation Group (OG)



Mulkear River Catchment Overview

Limerick ▲

Annacotty ▲

Clare Glens ▲

Annagh River

Murroe ▲

Mulkear River

Cappamore ▲

Caherconlish ▲

Dromkeen ▲

Pallas Green ▲

Toor

Rear Cross

Kilcommon

Kilcommon ▲

Bilboa River

Cappagh White ▲

Dead River

Oola ▲

Monard

Limerick Junction

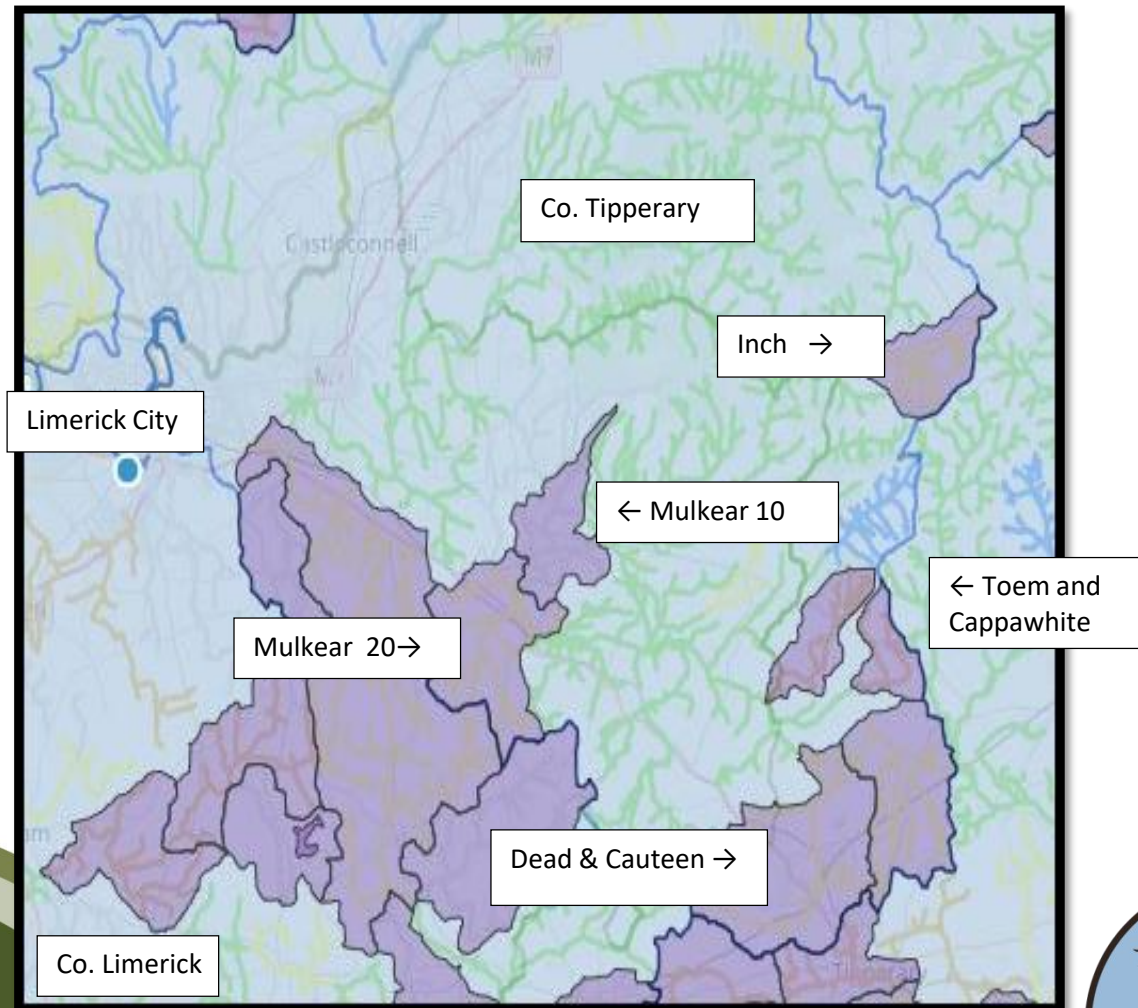
Tipperary ▲



Mulkear Catchment - Lower Shannon SAC

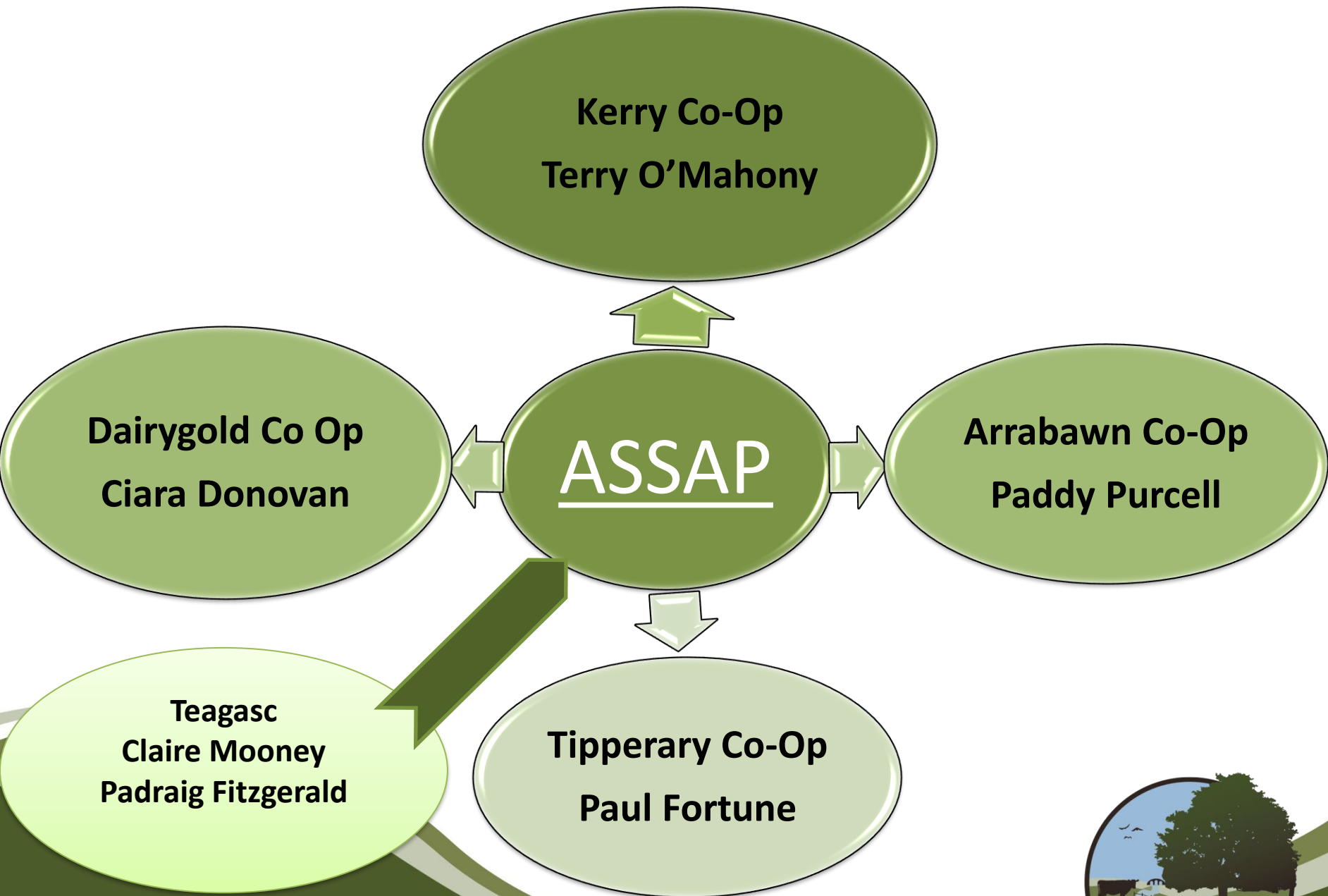
Priority Areas for Action & Water Quality in the Mulkear Catchment

(Source: <https://www.catchments.ie/maps/>)



Project Objectives

- Develop a collaborative approach with all stakeholders/wider community/farmers
- Undertake detailed Farm Assessments
- Implement on-farm mitigation measures
- Devise a Results Based Agri-Environmental Payment Scheme (RBAPS)
- Deliver farmer discussion group meetings
- Outreach programme



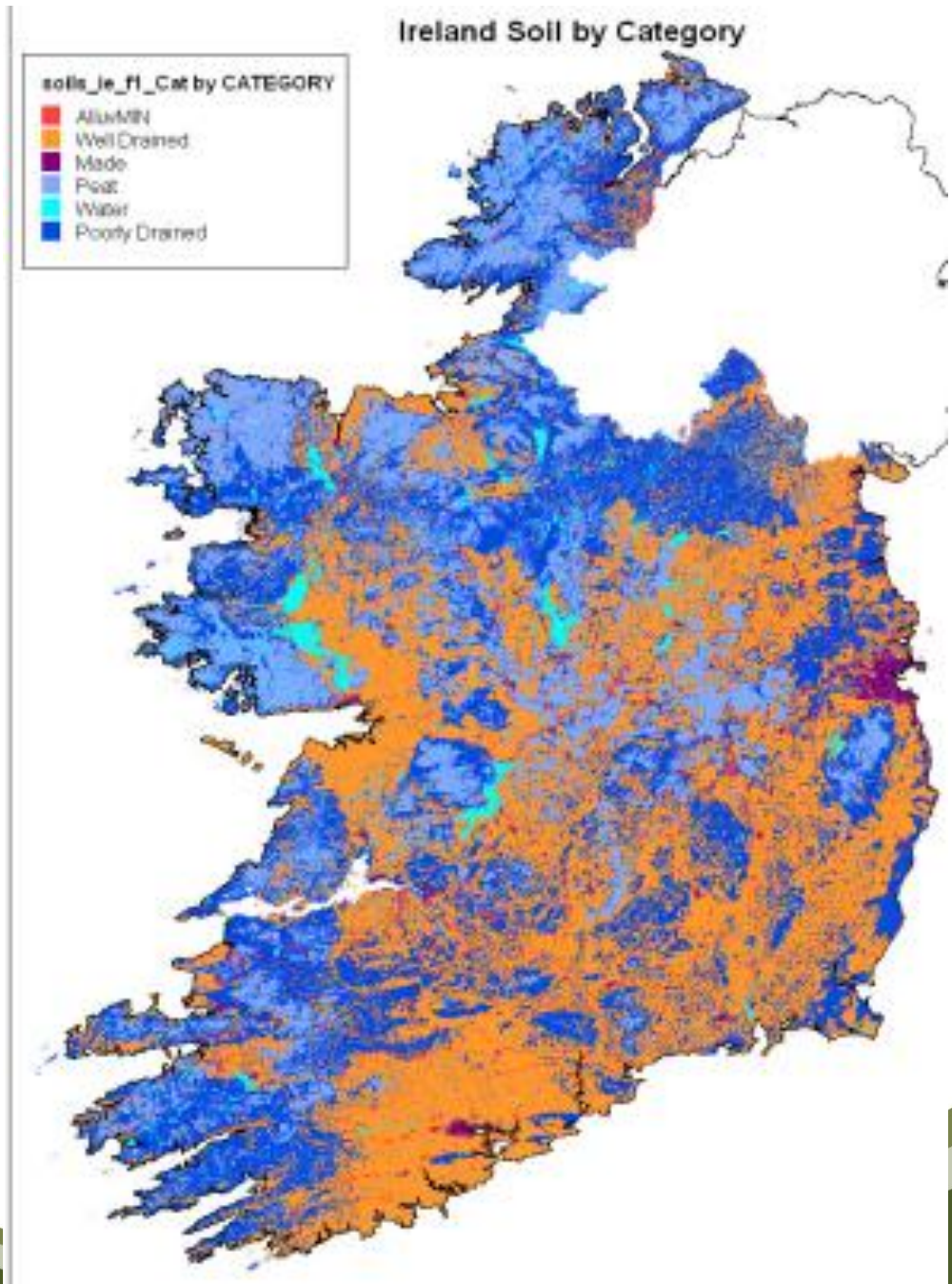
Farmer Selection Criteria

- **Scored**
 - Environmental risk
 - High, medium, low
 - Potential pressures
 - 1- potential
 - 2- minor
 - 3- major
- **Farmer Attitude**

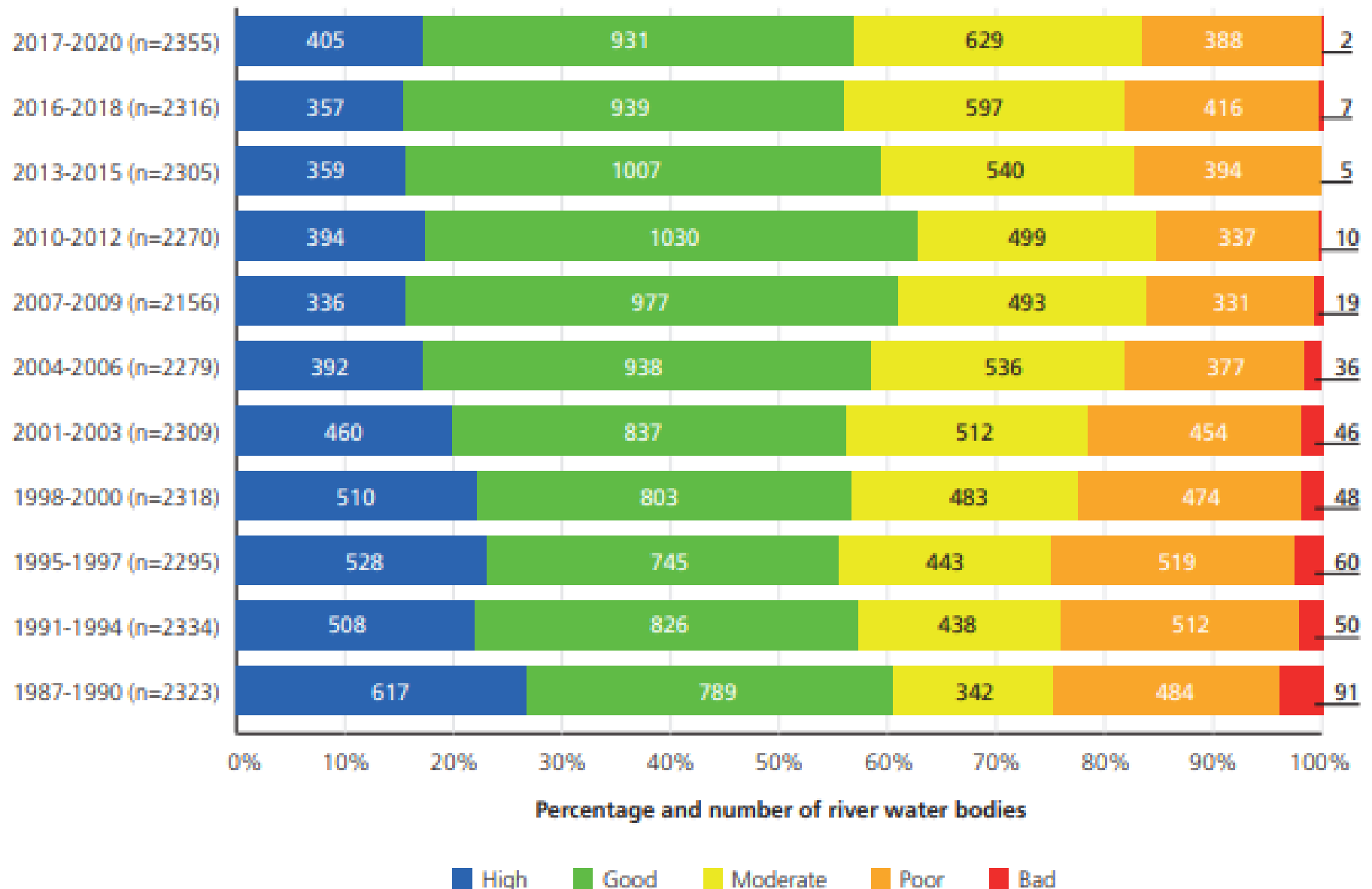


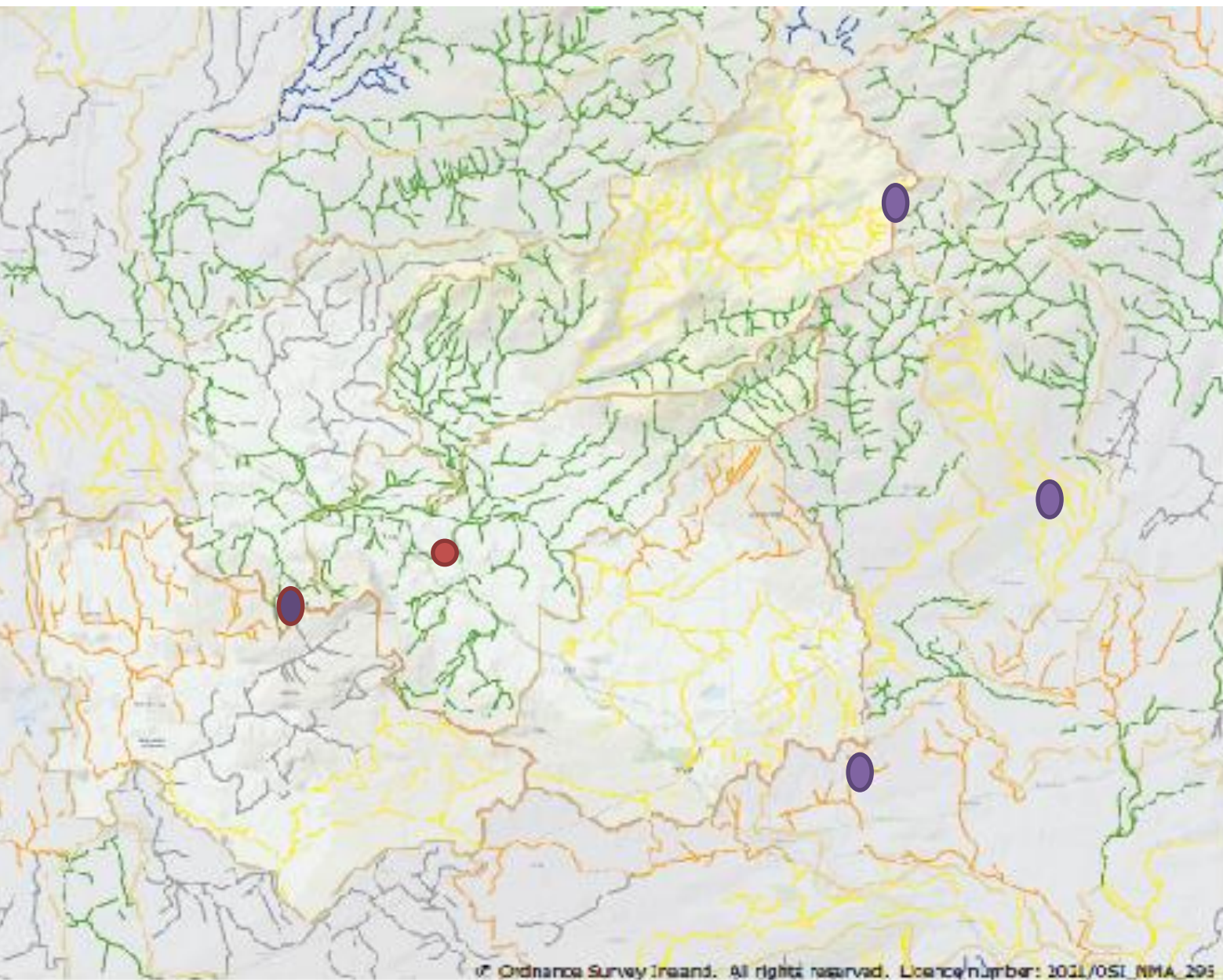
Soil Type

- Heavy gley
- High clay
- Poor drainage
- High water table
- Low permeability



River Quality (Q Value)





Legend

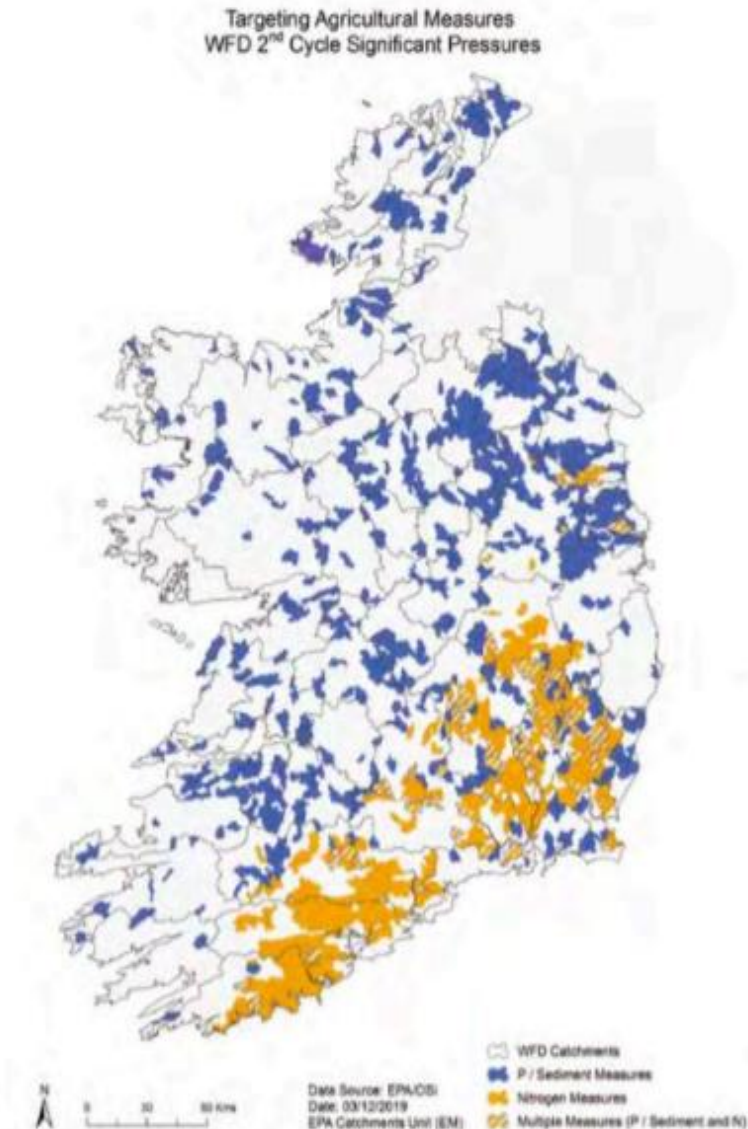
Water Quality Status

- High
- Good
- Moderate
- Poor
- Bad



Water Quality
WED Status 2013 - 2018

Nutrient Pressure

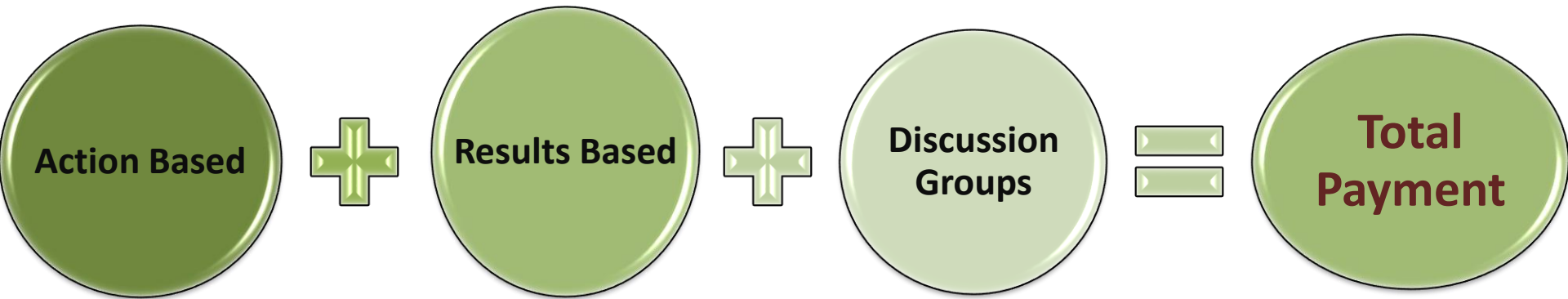


- Phosphorus & sediment



Pic 1: Heavy rainfall leads to overland flow of water, Phosphorus and soil particles.

Hybrid Payment Structure



Mulkear EIP Results Based Score Card

MEIP ID:

Farmer:

Date:

Riparian Buffer:

Max score: 20 points

3M BUFFER DISTANCE	1	2	3	4	5
MAINTANCE OF BUFFER	1	2	3	4	5
PROTECTION FROM LIVESTOCK	1	2	3	4	5
ESTABLISHMENT OF COVER	1	2	3	4	5

TOTAL SCORE:

(AVAILABLE PAYMENT BASED ON SCORE)

ISSUES RESULTING IN NIL PAYMENT
LIVESTOCK ACCESS SLURRY/FERTILISER APPLICATION PESTICIDE APPLICATION FARMYARD RUNOFF

Field Officer		Date	
Farmer		Date	



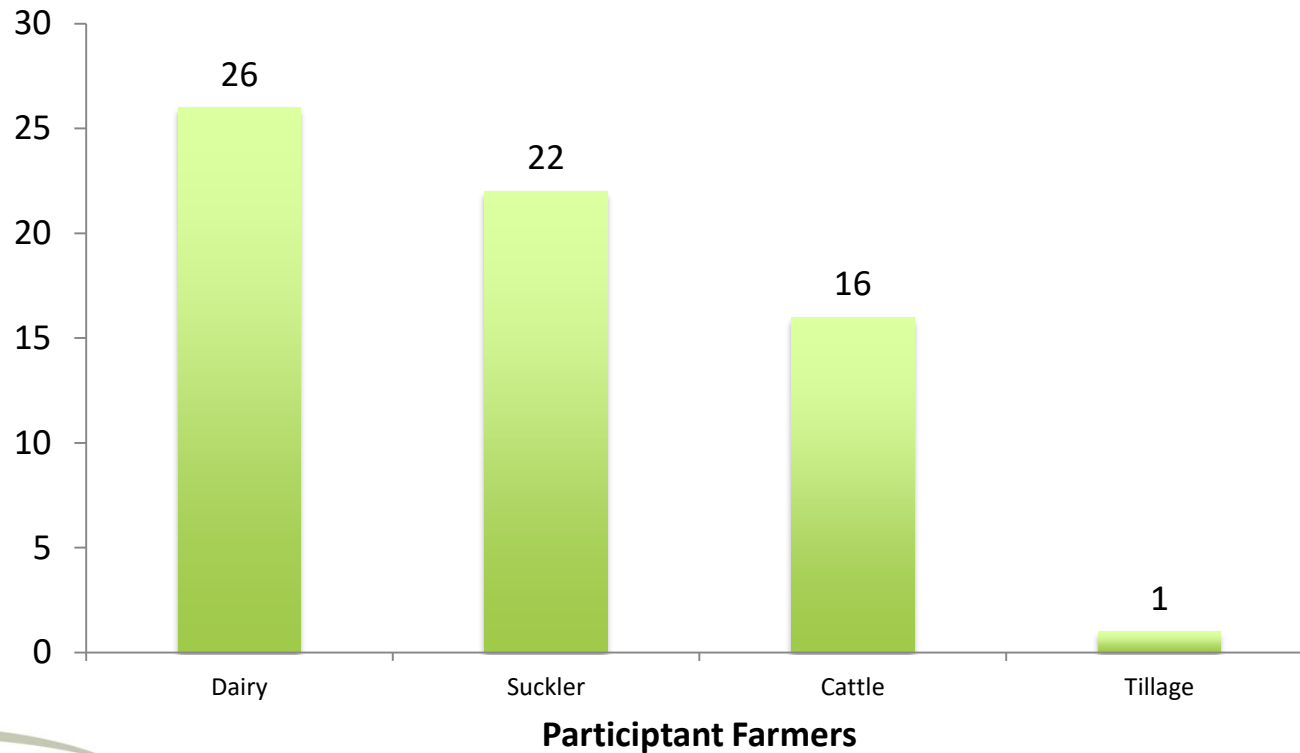
Examples of Mitigation Measures

	Measures	Farm Requirements	Unit Payment
Nutrient Management	LESS	Max 270m ³	€3.00/m ³
	Lime application	Max 80 ton	€12.50/ton
	Multi-species sward	2ha min – 6ha max	€330/ha
Water Supply/Access	Water troughs	Max 5/farm	€200/trough
	Fencing watercourse	Max 1,000m	€1.50/m
	Solar pumps	Max 1/farm	€1,795/pump
Habitat Retention/creation	Ponds	1/farm	€2,400/farm
	Wetland	1/farm	€2,400/farm
Farmyard runoff	Silt-traps/interceptor drains	Min 3 chambers	€2,000/farm





Participating Farmers



This aerial map shows the 30th Precinct in the Newport News area. The precinct boundary is outlined in red. A white line indicates the County Line, and a black line indicates the City Line. The map is populated with 30 yellow dots, representing the locations of the 30th Precinct. The dots are distributed across the city area, with a higher concentration in the central and eastern parts. Labels on the map include 'Newport News', 'County Line', 'City Line', 'Burrhead (Burrhead)', 'Chatham', 'Pa. Bingham', 'Newport', 'Rearcross', 'Kassman', 'Cappagh (Cappagh)', and 'Lumley (Lumley)'. The map also shows various roads and geographical features like water bodies.

0 2.25 4.5 9 Kilometers

- 0 2.25 4.5 9 Kilometers



Legend

0 2.25 4.5 9 Kilometers

- Participating farmers

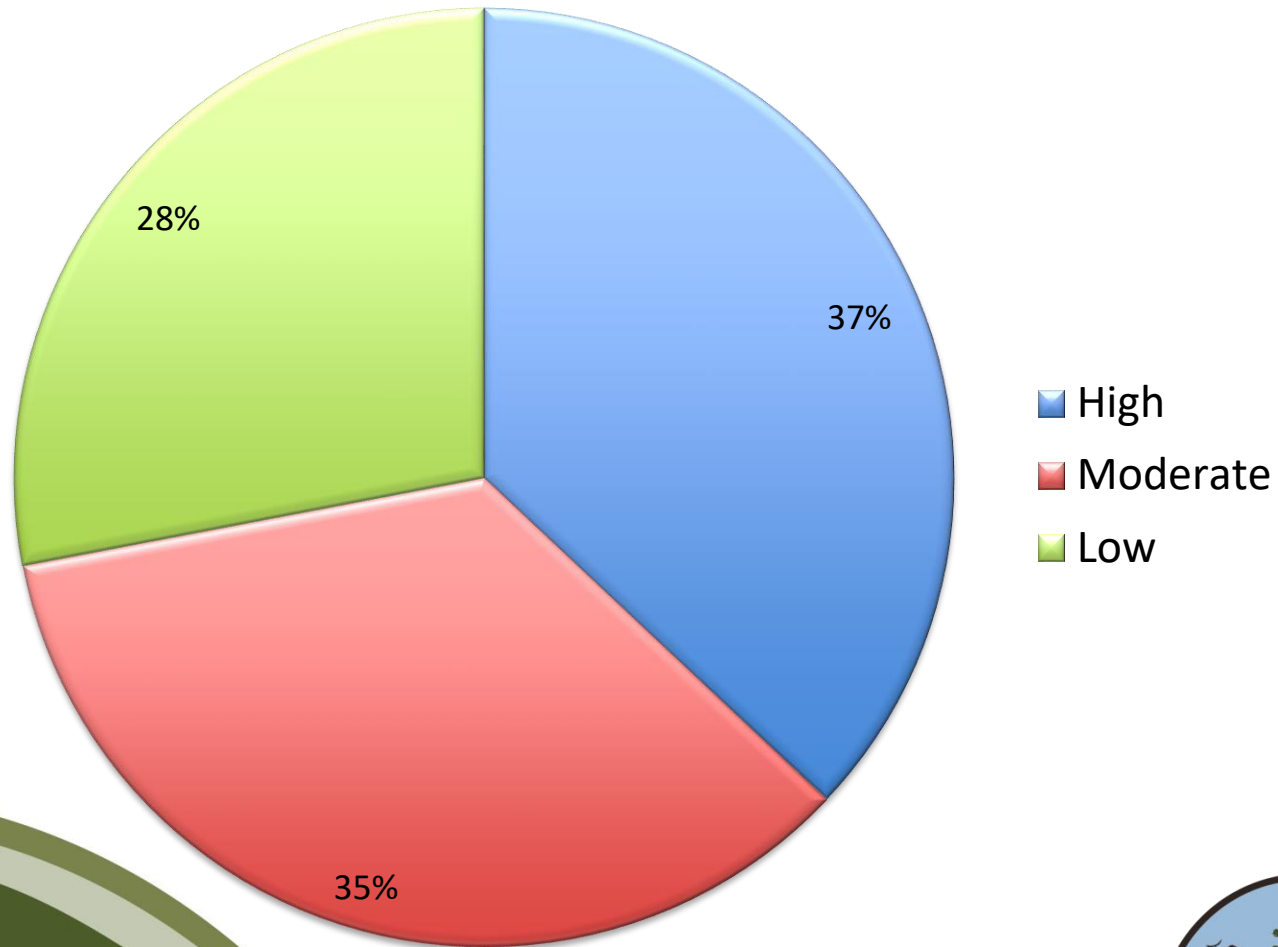
☐ Mulkear Catchment

— Waterbodies

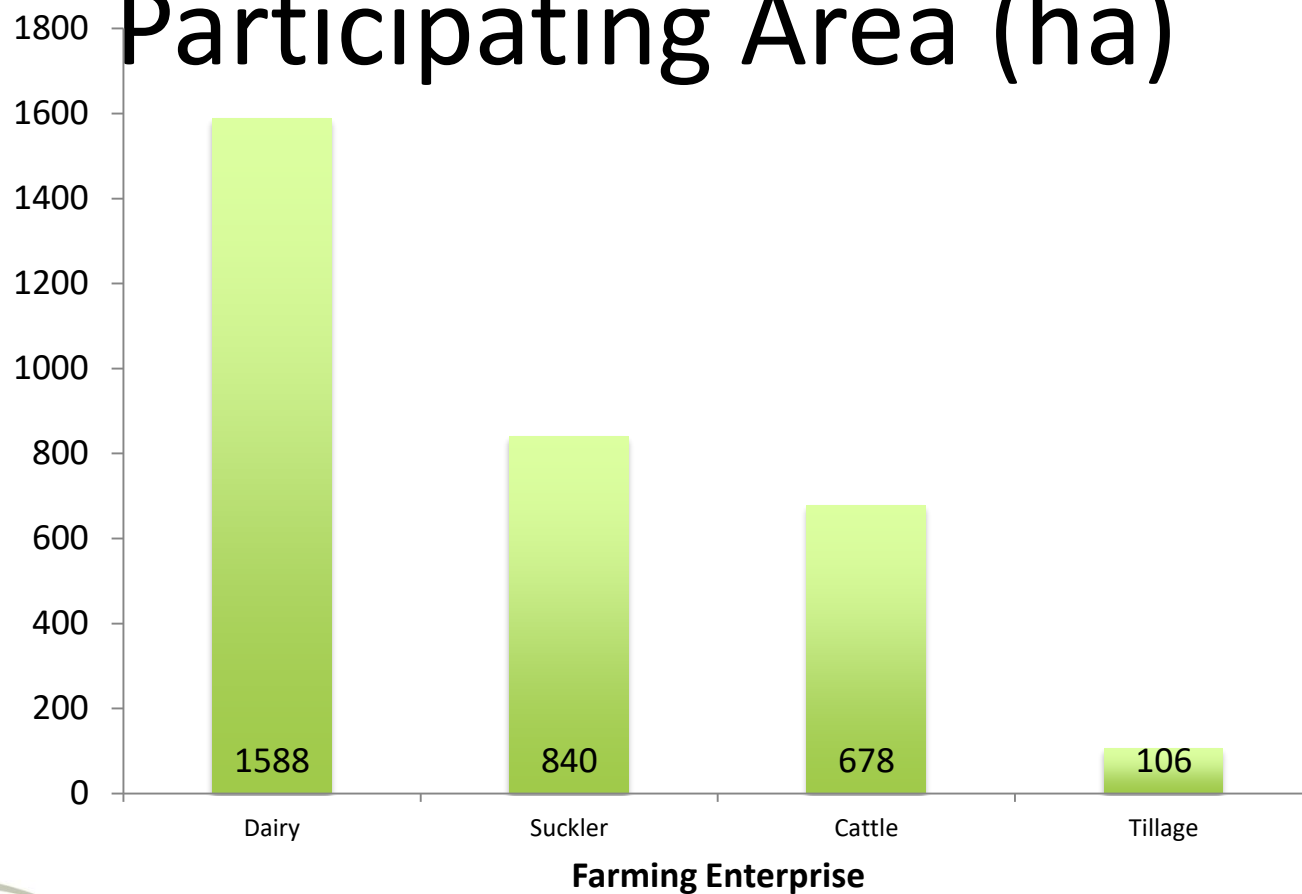
0 2.25 4.5 9 Kilometers

A horizontal number line with a solid line and tick marks. The line starts at 0 on the left and ends at 9 on the right. There are major tick marks at 0, 2.25, 4.5, and 9. Between 0 and 2.25, there are three smaller tick marks at 0.75, 1.5, and 2.25. Between 2.25 and 4.5, there are three smaller tick marks at 3.0, 3.75, and 4.5. Between 4.5 and 9, there are five smaller tick marks at 5.25, 6.0, 6.75, 7.5, and 8.25. The label "9 Kilometers" is placed at the right end of the line.

Farm Environmental Risk



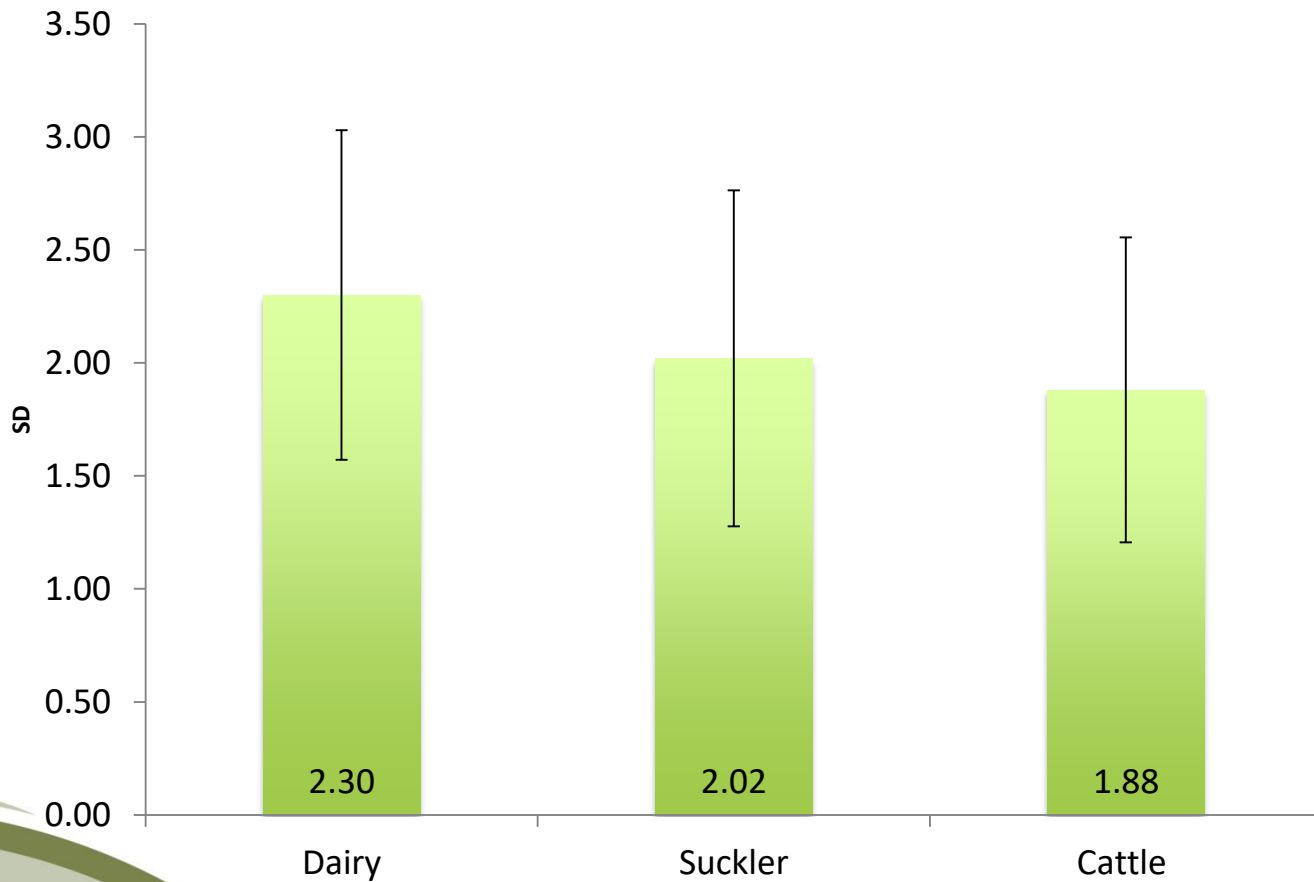
Participating Area (ha)



Total area c. 3,200 ha



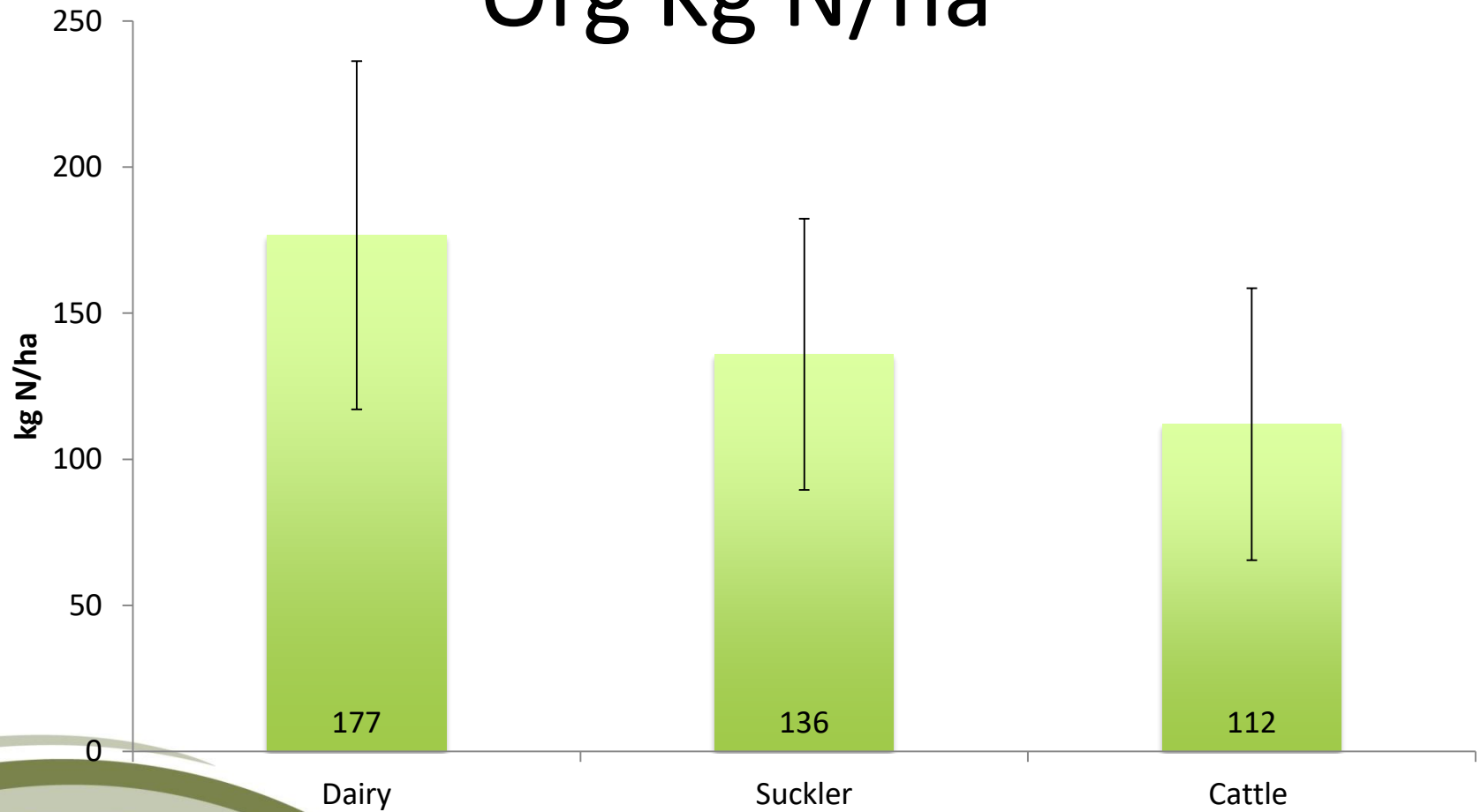
Stocking Rate (LU/ha)



Average 2.08 LU/ha



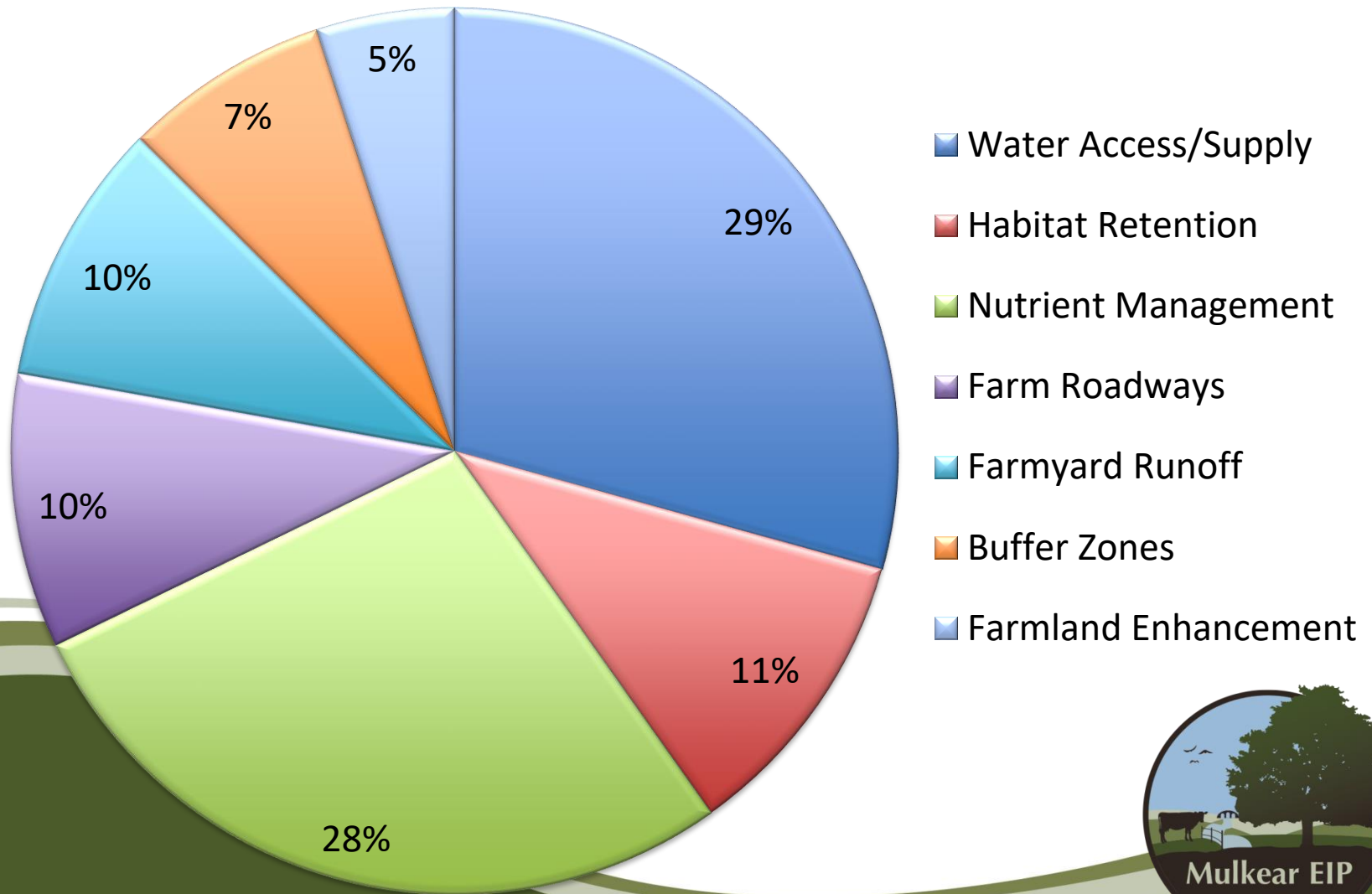
Org Kg N/ha



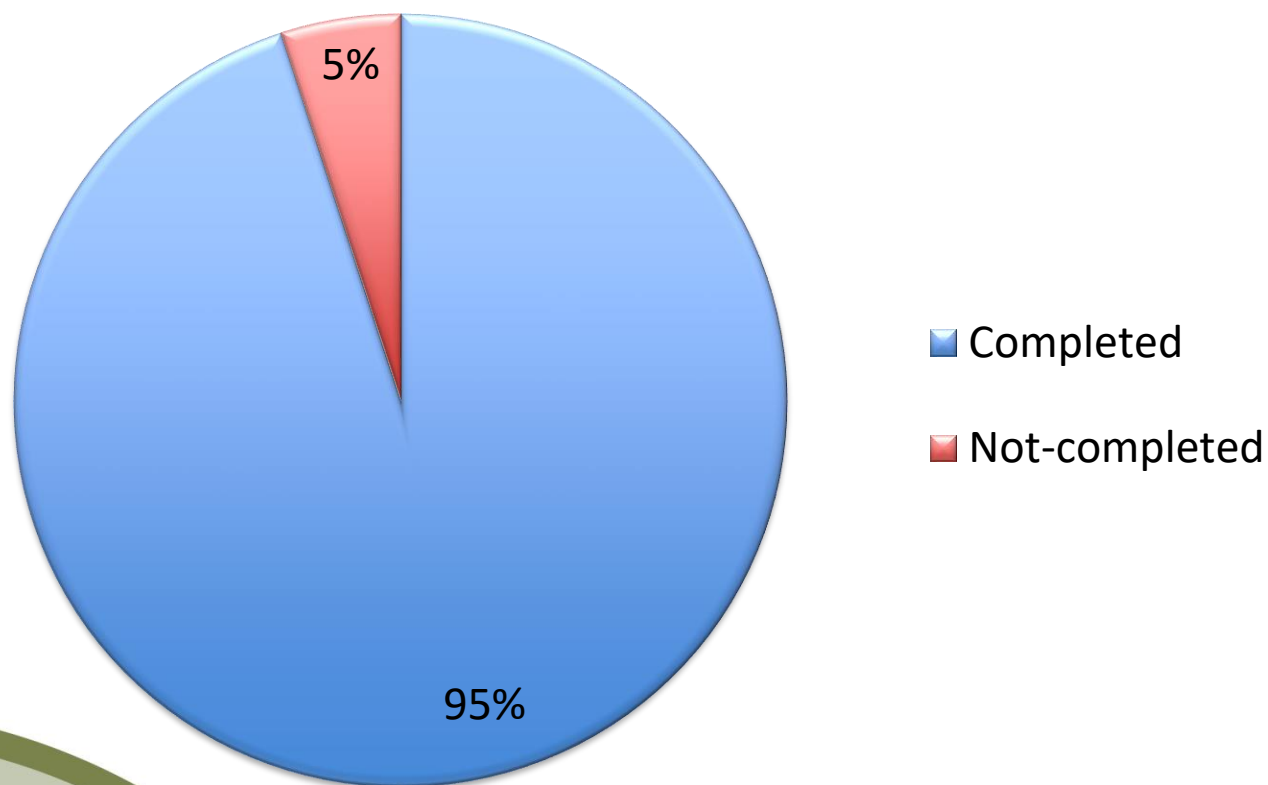
Average 145kg N/ha



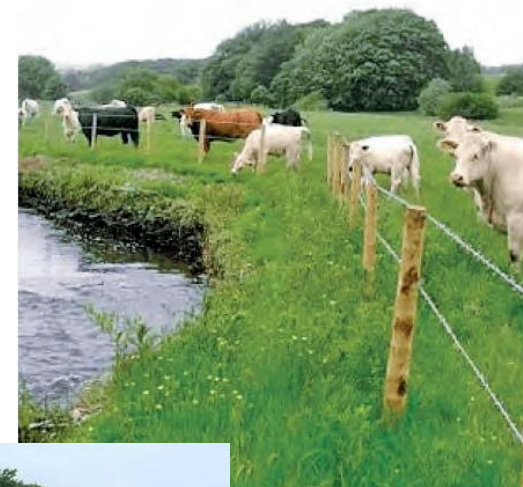
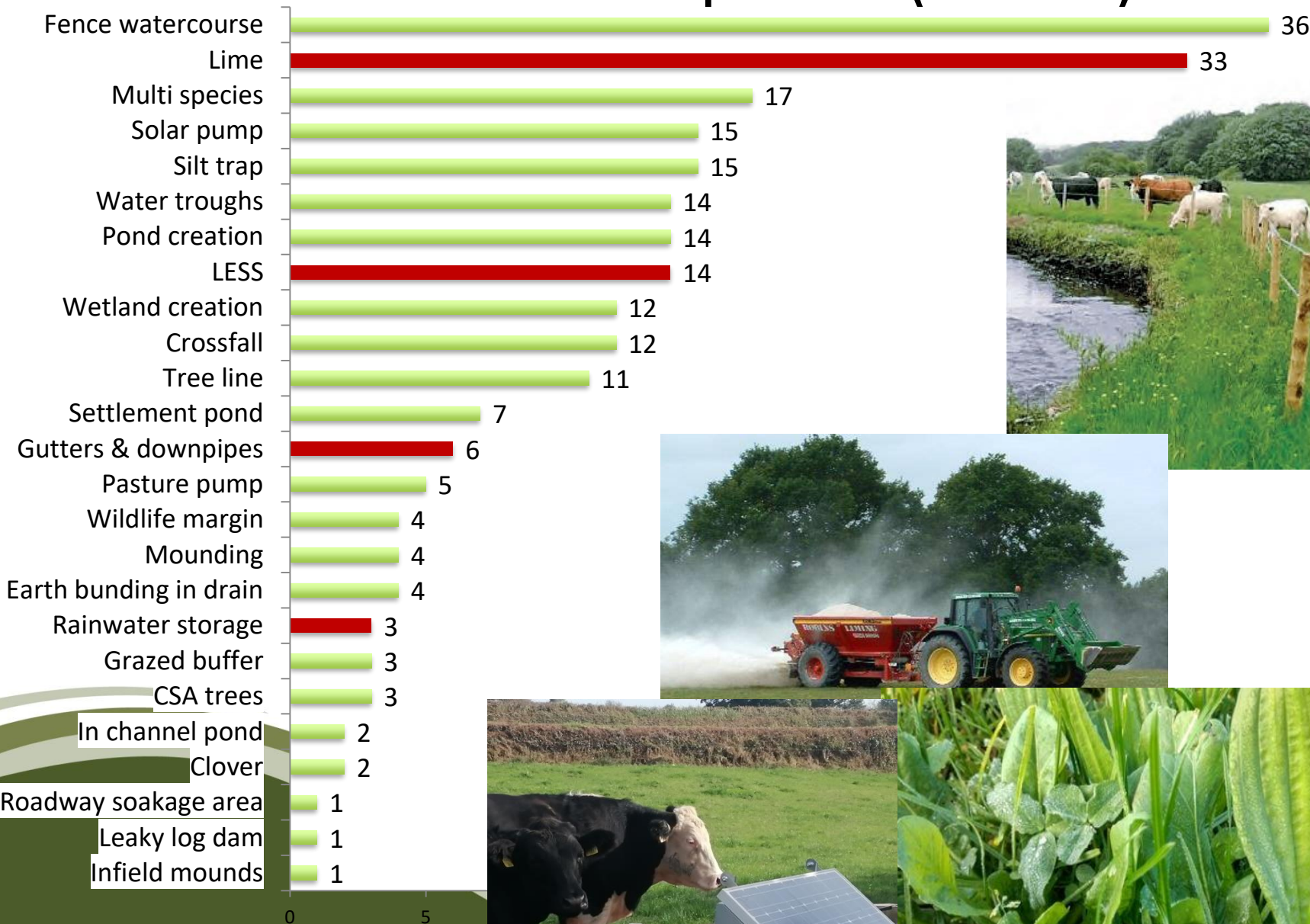
On- Farm Actions Uptake



On-Farm actions (n = 252)



Actions Completed (n=239)







Action	€
Fence watercourse	€16,836
LESS	€11,340
Pond creation	€11,200
Silt trap	€9,833
Lime	€9,762
Crossfall	€9,104
Solar pump	€8,743
Wetland creation	€8,600
Tree line	€6,343
Multi species	€6,164
Settlement pond	€4,667
Other	16,410

Farmer Discussion Groups

- Impact of Farming Practices on Water Quality
- On farm nutrient pathways
- Soil Fertility
- Importance of soil pH
- Timing and Application of nutrients –
Slurry/FYM/fertiliser
- Nutrient Management Planning



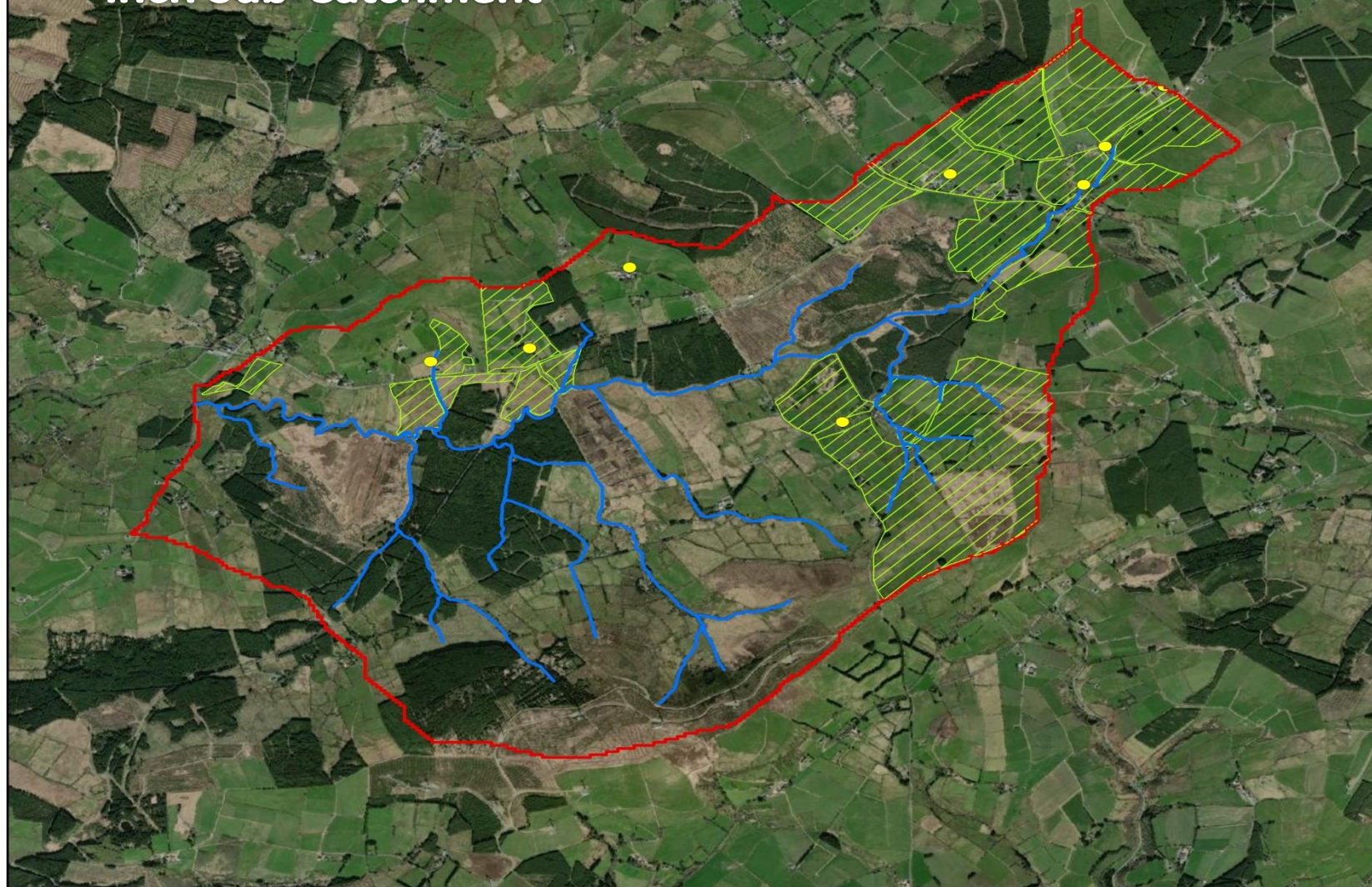
Project Funding

Proposed % Breakdown of Overall Budget	
Project implementation	71.0%
Project Administration	23.5%
Monitoring & Evaluation, Community Outreach & Dissemination	5.5%

- Each farmer c. €7,000



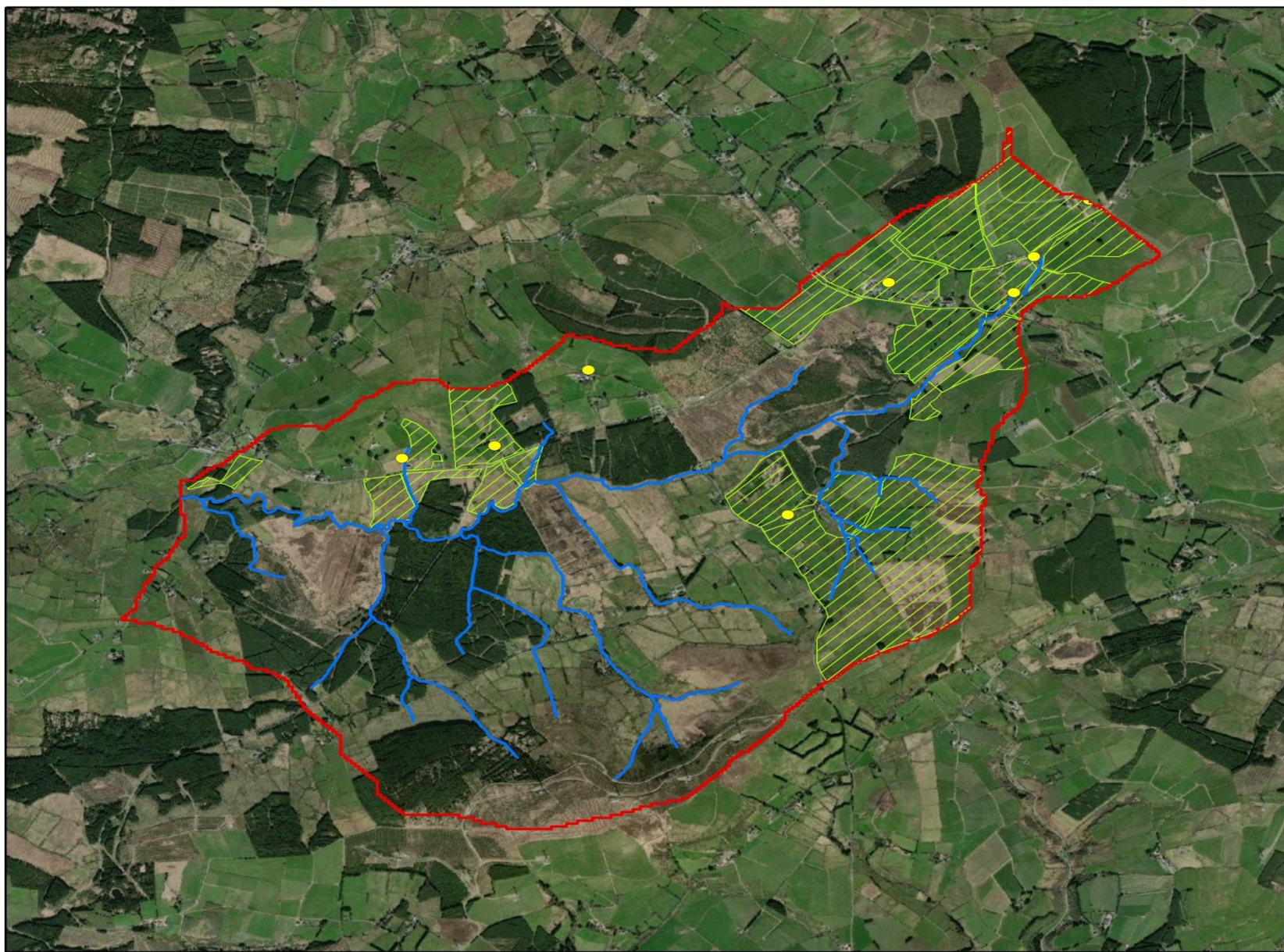
Inch Sub-Catchment



Legend

- Participating farmers
- Waterbodies
- ▨ Land parcels
- ▭ Inch catchment

0 0.375 0.75 1.5 Kilometers



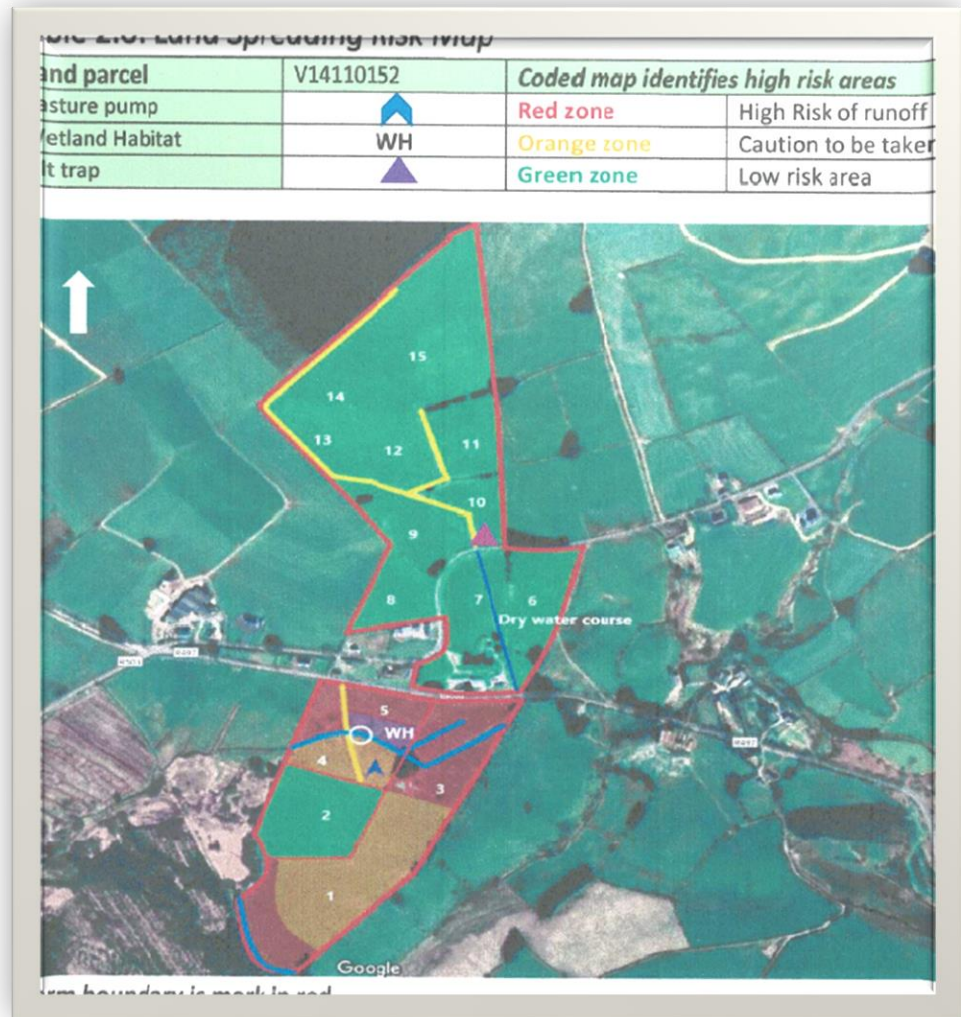
Legend

- Participating farmers
- Waterbodies
- ▨ Land parcels
- ▭ Incb catchment

0 0.375 0.75 1.5 Kilometers

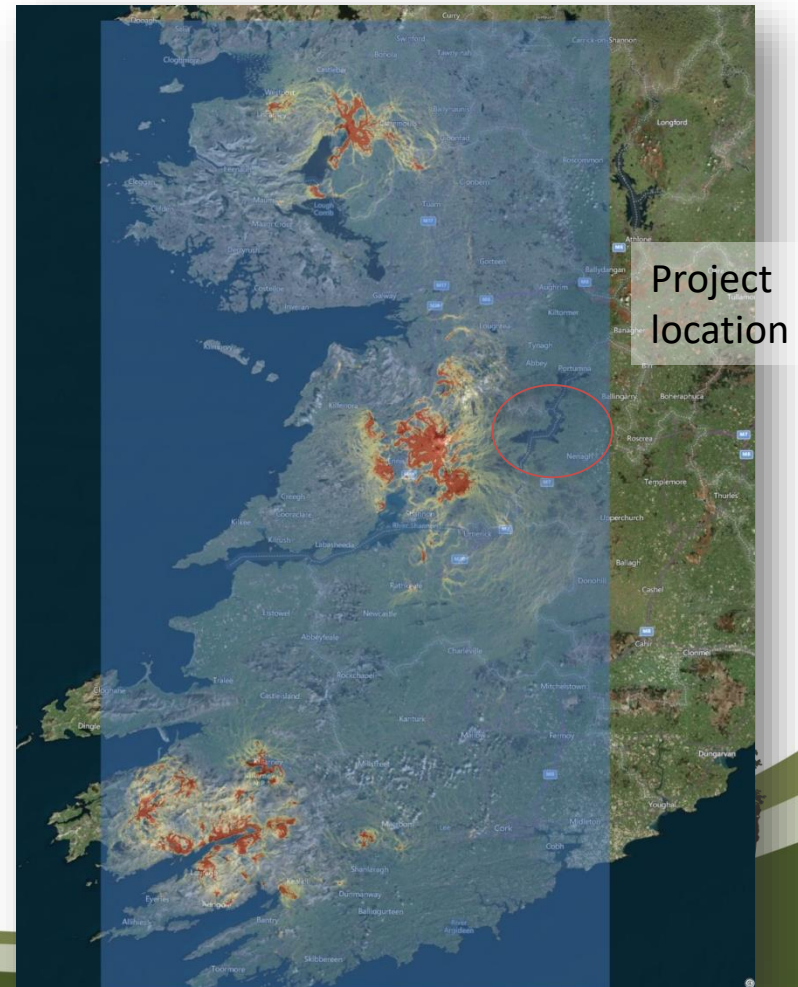
Next Steps

- Nutrient Management Plans
- Slurry/Fertiliser Risk Maps
- Attitudinal Questionnaire
- Slurry Analysis
- Water Monitoring



Limerick Lesser Horseshoe Bat Conservation Project

Likely pathways between lesser horseshoe bat populations in Ireland



Limerick Lesser Horseshoe Bat Conservation Project



Mulkear River Catchment Project



Project Highlights

- 38km watercourse fenced
- 23 water pumps installed
- 2,700 ton lime spread
- 2,130 trees planted
- 61 ha Multi-species sward sown
- 1 million (5,000m³) slurry applied using LESS



- 3,300 m buffer zones created
- 23 Silt-traps/settlement ponds/in-channel ponds
- 15 ac wetland fenced off
- 14 ponds enhanced/created



Farmers Feedback

- *“Very informative and all actions I agreed to complete were thoroughly explained to me on my farm – not by phone”*

Michael Ryan, Rath

- *“The Discussion Groups were excellent – refreshed my memory of things I had not taught about for years”*

Edward Carr, Knockmore

- *“Mulhear EIP is facilitating farmers both financially and educationally to complete measures that will in time improve the water quality of the river”*

Eddie O Malley, Pallasbeg

- *“This project has very clearly highlighted the importance of declining water quality in the Mulkear and the need to undertake action now for the future generations”*

Martin Crowe, Carrigmore

- *“This project has shown me that by mind-set needs to change if I want to see salmon back in the stream in my lifetime”*

John White, Knockaneera



Thank you

