



An Roinn Comhshaoil,
Aeráide agus Comarsáide
Department of the Environment,
Climate and Communications



An Roinn Tithíochta,
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Department of Housing,
Local Government and Heritage



LOCAL AUTHORITY
Climate Action
Training Programme



Environment Services Training Group

LOCAL AUTHORITY CONFERENCE - 2024



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Local Authority
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LOCAL AUTHORITY ENVIRONMENT SERVICES TRAINING GROUP CONFERENCE– 2024

Farming for Water - European Innovation Partnership AGRI Project

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Farming for Water European Innovation Partnership Project AGRI

Context

- **EIP – European Innovation Partnership**

- Initiative co-funded by the European Commission and Government of Ireland (DAFM & DHLGH)
- Facilitates farmers, scientists and other experts to work together to develop and test new practices that are environmentally friendly and economically sustainable.

CORE AIM – *Innovation Learning: Road test new ideas and practices that can be adopted more widely by farmers to help achieve productivity, efficiency and sustainability objectives.*



Genesis of the Farming for Water EIP

LAWPRO Catchment Assessment



Where Agriculture is significant pressure



Referral to ASSAP

(Agricultural Sustainability Support and Advisory Programme)



Farm-based assessment



Installation of supplementary Measures



ASSAP review in 2022 identified that implementation of measures has been hampered by lack of funding

Farming for Water EIP – *the detail*

- €60 million Agri-environmental scheme for farmers, spanning a five-year period (2023 – 2027).
- €50 million in payments to farmers for supplementary measures (i.e. non-regulatory) by DAFM, co-funded by the EU
- €10 million for operational costs by DHLGH
- Managed by LAWPRO in partnership with Teagasc and Dairy Industry Ireland
- Final step in the ASSAP process - funding of supplementary measures only
- Aims to engage up to 15,000 farmers
- **Focus on water quality, with co-benefits for biodiversity and climate actions (Nature-Based Solutions)**



Eligibility

- Targeted approach, focus is on areas where water quality needs to be **restored**
- 2nd cycle and 3rd cycle Priority Areas for Action (PAAs) where agriculture is the significant pressure
- Farms will be assessed to identify where there is a requirement for measures
- Nitrate vulnerable areas in the South & South-East – measures will be open to all dairy farmers and tillage farms that have catchment referrals for Nitrogen.



Project Launch

- 7th March 2024, on the farm of David and Róisín Fay, and the Lilliput Adventure Centre
- Adjacent to Lough Ennell, Mullingar, Co. Westmeath
- Jointly launched by: Minister Charlie McConalogue, Minister Malcolm Noonan and Senator Pippa Hackett
- Measures similar to those in the Farming for Water EIP project have contributed to water quality improvements

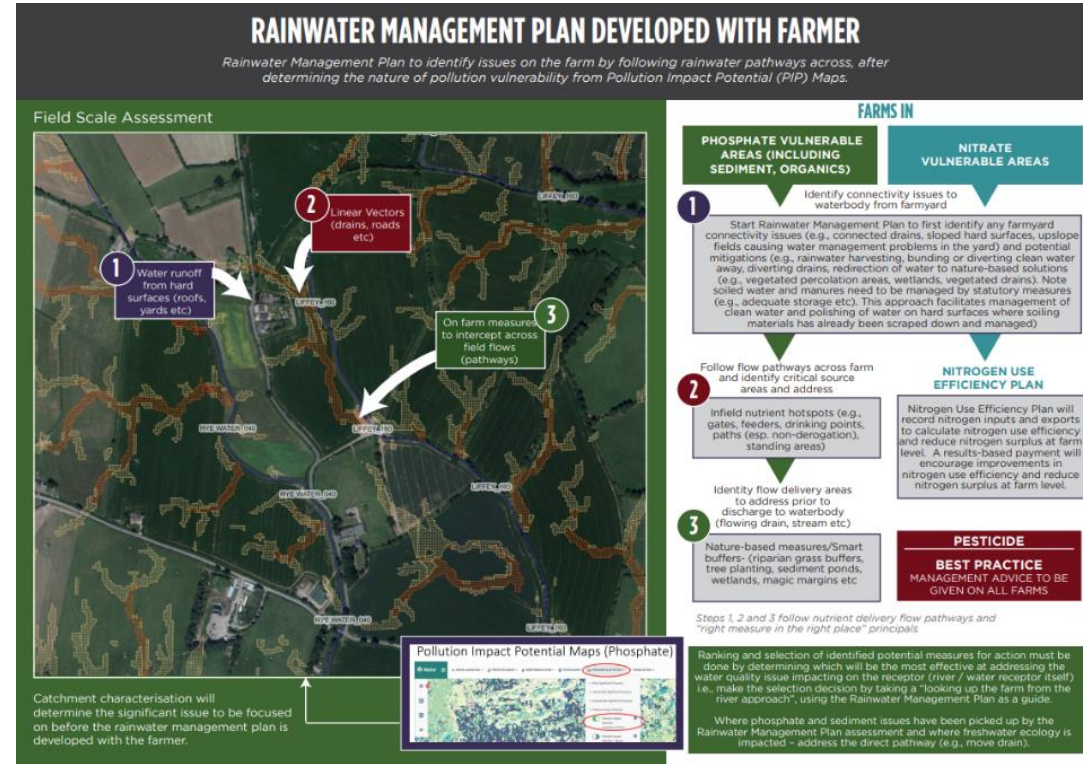


EIP Project Areas of Focus



Innovation

- Applications start with a **Rainwater Management Plan** building on the catchment science
- Measures selected based on PIP maps, and actual scenarios on the farm
- Local knowledge is key – farmer and Advisor input.
- Adhering to *'the right measure in the right place'* principle
- Measures selected, agreed and included in the EIP application
- Validation and verification of measures built-in
- Source-Pathway-Receptor focus



Measures

Source Control

RWMP
Farmer Training Courses
Nutrient Management Plans
Nitrogen Surplus
Catch/Cover crops
Multi species sward
Decommissioning of sheep dips

Pathway Interceptor

Hedgerows
Riparian buffer zones
Tree Planting in buffer zones
Wetland ponds
Earthen bunds
Management of critical source areas
Water course crossings
Willow filter beds

Receptor

Bovine and ovine exclusion from watercourses
Solar Power Electric Fence
Alternative water supplies
Water Troughs
Vegetated Bunded drains

Innovation – Research Hub

- UCD, UCC, ATU, Trinity, James Hutton Institute UK, Teagasc Research, Teagasc ACP & others
- Mutually beneficial arrangement which leverages existing funding streams and connects researchers within the EIP to address relevant research questions
- Research projects being developed to aid validation of the measures being tested as part of the Farming for Water EIP
- Internal monitoring and testing will be designed to bridge gaps in validation where necessary
- Synergies with the following funding streams EPA, DAFM, SFI, Horizon 2020, Interreg funding and Teagasc Walsh Memorial
- Inaugural meeting in May.
- Baseline monitoring has been initiated in some pilots



WATEREIP RESEARCH HUB
Facilitating research through an applied integrated catchment management approach, from farm to catchment scale, to protect and restore water quality, centred on a national Agri-environment EIP project with a focus on multiple benefits.

BACKGROUND
The Water EIP is the largest European Innovation Partnership ever undertaken in the Irish Republic. This five year, 60 million euro project aims to bring about improvements in water quality with outcomes for climate change and biodiversity. 50 million will go in direct payments to farmers for measures including: Nutrient Management, Catchment Based Plans for farms and Nutrient Use Efficiency Plans for farms to create nutrient rich areas.

NATURE-BASED SOLUTIONS
The project will adopt innovative practices in nutrient management, the application of catchment based Water Reduction Measures (WRM) and other measures at farm level following the principles of Integrated Catchment Management, landscape agricultural practices. The application of Nutrient Management Plans for farms and Nutrient Use Efficiency Plans for farms to create nutrient rich areas.

WHAT IS WATER EIP?
The development of innovative solutions to address water resources & public water catchments.

THE RESEARCH HUB
The aim is to establish a research community focusing on the soil aspect. The community of researchers will develop the scientific protocols for the project to facilitate high quality practical scientific research. The Research Hub will also act as a project coordinator, research facilitator and practice which may be adopted within the EIP.

THE RESEARCH HUB WILL...

- Facilitate input from the academic community and applied research
- Provide subject matter expertise on adaptive management trials
- Identify farm scale measures to which research is applicable
- Develop best practice and knowledge in the area
- Apply existing high quality value in practice catchment based adaptive management planning
- Complement core project activities with range of catchment water quality areas of activity
- Developing industry and project based results
- Sharing and influencing research data
- Inform policy based on the practical, innovative, and local knowledge around the project.

KEY RESEARCH AREAS

- The water quality protection efficacy and multiple benefit potential of artificial versus natural interaction measures, across a range of farm enterprise types, land, slope and soil types.
- Nutrient management planning applied to the agricultural landscape incorporating nature based solutions.
- Operational and maintenance actions within an integrated catchment management context.
- Investigate the socio-economic factors underpinning the participation of farmers in water protection stewardship based leading to the adoption range of these agri-environmental schemes and policy.

RESEARCH COMMUNITY
This Research Hub already involves researchers from the Agricultural Catchments Programme, Teagasc Research, University College Cork, University College Galway, Dublin City University, Dublin City University, James Hutton Institute UK, LMU, LMU.

WARNING
RELEVANCE TO YOU
IF YOU OR YOUR RESEARCH COMMUNITY WOULD LIKE TO GET INVOLVED PLEASE GET IN TOUCH

PARTNERS
The Local Authority Waters Programme (LAWP), Teagasc and Dairy Industry Ireland (Dairy Group) with wider support from Food Industry Ireland, Dairy 2020 level research Institute, OPW, Lifford Scheme, National Federation of Group Water Schemes, Water Conservation Centre and Ag Food Film.

Co-funded by the Government of Ireland and the European Union

FOR MORE INFORMATION CONTACT YOUR LOCAL TEAGASC OR CO-OP ASSAP ADVISOR
www.waters.ie

Progress Highlights

1. Measures & Guidance

- 43 measures covering the range of pressures with a bespoke option
- Amended based on farmer and advisor feedback
- Specification and guidance document completed

2. Pilots

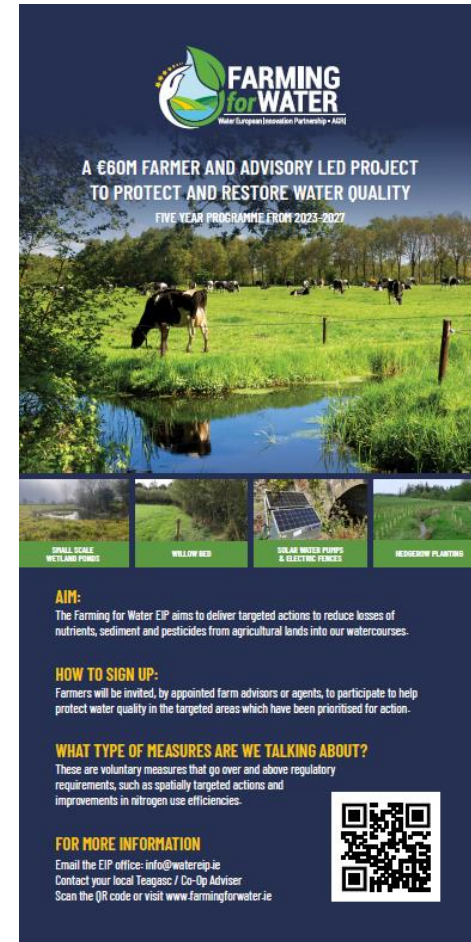
- Process Pilot late 2023
- Kerry Pilot Spring 2024
- Tillage Pilot – Catch/Cover Crops with a focus on the Castledockerell ACP (Agricultural Catchments Programme) catchment

3. ASSAP Mobilisation

- Training and supports for ASSAP team developed
- Applications received from each of the Dairy Processors
- Focus waterbodies selected or being selected by each Dairy Processor

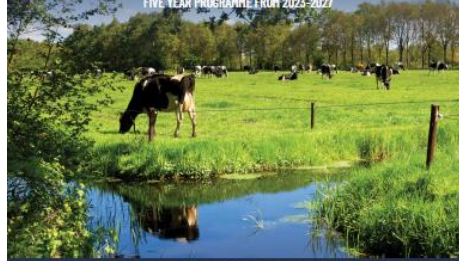




4. Engagement

- Extensive Engagement and promotion of the project during the summer months including the National Ploughing Championships
- Website is now live visit <https://farmingforwater.ie/>



**FARMING
for WATER**
Water European Innovation Partnership - AGRI

A €60M FARMER AND ADVISORY LED PROJECT
TO PROTECT AND RESTORE WATER QUALITY
FIVE YEAR PROGRAMME FROM 2023-2027








AIM:
The Farming for Water EIP aims to deliver targeted actions to reduce losses of nutrients, sediment and pesticides from agricultural lands into our watercourses.

HOW TO SIGN UP:
Farmers will be invited, by appointed farm advisors or agents, to participate to help protect water quality in the targeted areas which have been prioritised for action.

WHAT TYPE OF MEASURES ARE WE TALKING ABOUT?
These are voluntary measures that go over and above regulatory requirements, such as spatially targeted actions and improvements in nitrogen use efficiencies.

FOR MORE INFORMATION
Email the EIP office: info@waterqip.ie
Contact your local Teagasc / Co-Op Adviser
Scan the QR code or visit www.farmingforwater.ie



ARTICLES

ARTICLES

Farming for Water case study: willow beds - a nature-based solution to reduce overland runoff and pollution in Kerry

The Farming for Water Project is funding an innovative willow bed on the land of Mike and Bernie O'Sullivan, Cordal, Castleisland, Co. Kerry. A willow bed is an area of densely planted willow trees, and this nature-based solution will help slow the flow of water, allow sediment to settle and prevent any dissolved nutrients from ending up in the surrounding water courses, primarily the River Maine, a Priority Area for Action identified in the second cycle River Basin Management Plan. This measure is just one of the 41 possible actions identified by the Farming for Water EIP.

Mike and Bernie are milking 135 cows on the family farm and Mike, having engaged with Kerry Agri Business Sustainability Advisers Terry O'Mahony and Caoilfhionn Dodd explored the Farming for Water EIP concept and decided to introduce additional measures to help make his farm even more sustainable and environmentally friendly.

"Protecting water quality is very important and even just for peace of mind for us when the inspectors are coming, it is good to have everything in order. This is a great project and the key to it is that the funding is right. You have to have the funding in place, and I must say it has been a very straight forward process for us because the advisors have been so pro-active." - Mike O'Sullivan

The first step on the journey for Mike in conjunction with the advisors was to devise a Rainwater Management Plan. This is a whole farm assessment identifying areas on the farm where water flows both within the farmyard & the land area. This assessment is critical to establish and pinpoint the most suitable location for mitigation measures.

After that the measures to be introduced were identified in conjunction with the farmer and the result has been included:

- holding off on slurry and chemical spreading until April in critical source areas
- roadway run-off management and sediment traps
- the introduction of solar pumps in an out-farm
- the planting of 16 acres of multi-species swards

"I see this as a huge opportunity to put our property in order for our children coming along after us. I feel it is a very good initiative and I have learned a lot from it. The aim is that other farmers will be able to come to my farm, observe the work and follow suit on their own farms. It is a no brainer really." - Mike O'Sullivan

Construction of the willow bed has taken less than two days in total. The bed which measures 100 x 4 metres was dug out by an excavator with the topsoil re-used, and the subsoil drawn away to another part of the farm. The 1050 willow plants were then sown in six rows at 0.7 metres between the rows and 50cm between each stem, along the length of the bed and these will need to be cut back after a year. However, they will be harvested every third year thereafter, but if Mike decides to use the willow for firewood, the cycle will be seven years. The stems which were 8 inches long, were sown 2-3 inches above the ground.



The willow bed is prepared by digging out an area 4 metres wide to allow for the sowing of the stems.

"Willow beds are a nature-based solution that contribute positively to the challenges that lie ahead. They help improve water quality, provide renewable energy production, enhance biodiversity, help mitigate against climate change impacts through carbon sequestration, and can help increase resilience to flooding. We will be monitoring the effectiveness of this measure throughout the life cycle of the project through our Research Hub" - The Farming for Water Project Team

"Mike can decide what to use the willow for, but there is the option of cutting it back after a year, mulching it and then using it as bedding for the cattle. Or he can get into the seven-year cycle

and use it for firewood if he prefers. He has options," said Terry who explained that the willow bed will be fenced off from livestock, even though the willow is in no way harmful to the animals. Willow beds were constructed under the watchful eye of Féidhlim Hartry of FH Wetland systems Ltd, based in Clare, who did the original design for the willow bed, and was on hand to give additional guidance on construction.



Planting of the 1050 stems 0.7metres between each row at 50cm apart took the three helpers an hour to complete.



Terry O'Mahony, Kerry Agri Business Sustainability Advisor, pictured with Mike O'Sullivan.

All the water from the clean concreted areas of the farm will be directed through a sediment trap towards the willow bed which allows for the settlement and polishing of water. The willow beds help to slow the flow of water, allow sediment to settle out and any traces of dissolved nutrients to be taken up by the growing vegetation and through evapotranspiration of the growing willows.



Advisor Caoilfhionn Dodd, Kerry Agri Business Sustainability Advisor, explains the stems to Bernie O'Sullivan.

In Ireland water shortage will seldom be a limiting factor for willow growth and calculations indicate that a growing season annual precipitation level of 550-600mm is required for optimum growth. Willow's high-water uptake makes it a very suitable crop for sustainable water management, and it can help reduce fine sediment run-off.

"We have about fifty dairy farmers in the Castleisland area who are signing up for the Farming for Water project with the view to introducing different measures. We now have this example of a willow bed to showcase, and we have the expertise locally to demonstrate how the work should be done. I would certainly encourage others to do the same because improving water quality is key to retaining the derogation as well as everything else." - Terry O'Mahony, Kerry Agri Business Sustainability Advisor

Planting of the willow took approximately one hour to complete with three planters working on it while the excavation work took a day and a half. But the impact the willow bed will make on the farm into the future will be enormous.

"It will be a real feature on our farm. It will be great to see it growing and having an impact on the landscape as well as on the land itself. I can see nothing but benefit from having introduced this measure. Nobody made me do it - it was a voluntary action but the fact that it is funded makes it very attractive." - Mike O'Sullivan

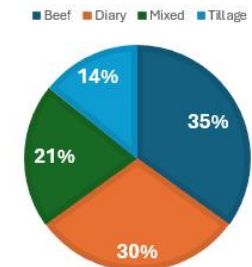
Noel Dundon, Farming for Water EIP Communications and Engagement Lead

Key Performance Indicators

- Number of applications received
- Number of Dairy, Beef, Sheep, Tillage farms applying
- Average number of measures per application
- Type and location of each measure applied for
- Total payments applied for
- Total approved payments after technical validation
- Average payment claimed to date
- Number of derogation farmers applying
- Geographical distribution of applications



SECTOR BREAKDOWN



Collaboration with Industry

Dairy Industry Ireland

- Project partner along with LAWPRO and Teagasc, representative on Operational Group and Strategic Oversight Committee
- Working with Sustainability leads in the integration of Farming for Water EIP into Dairy Sustainability Action Plans

Dairy Processors

- Working with Dairy Processors including Kerry Group, Dairygold, Tirlán and Arrabawn on supplier Water Quality Outreach events
- 30 Dairy Advisors in ASSAP team, providing continuous support

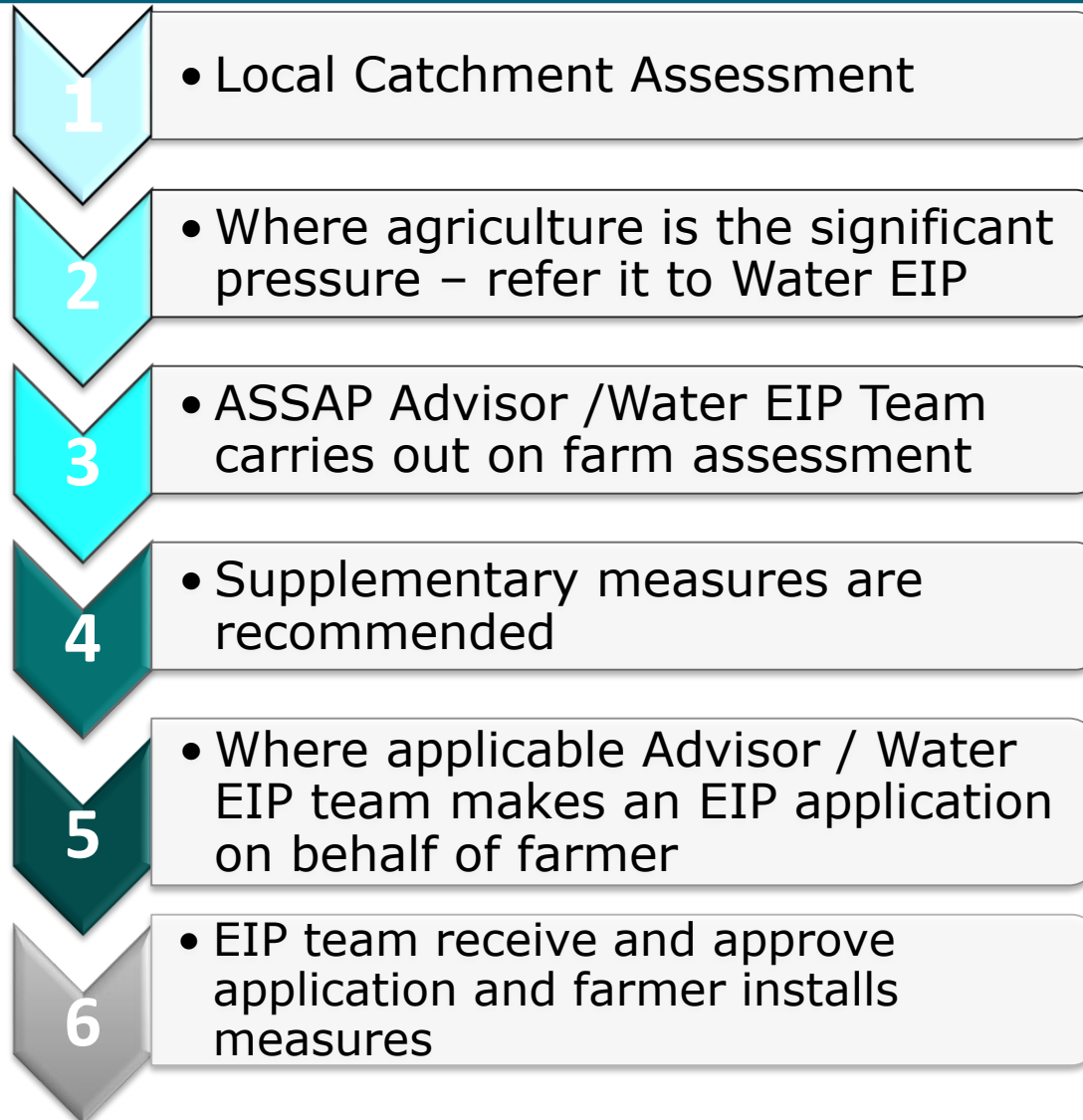
Meat Industry Ireland

- Engagement with MII and Meat processors (KEPAK, ABP and Dawn Meats) to identify actions which will support water quality
- Potential to provide additional advisors to make applications



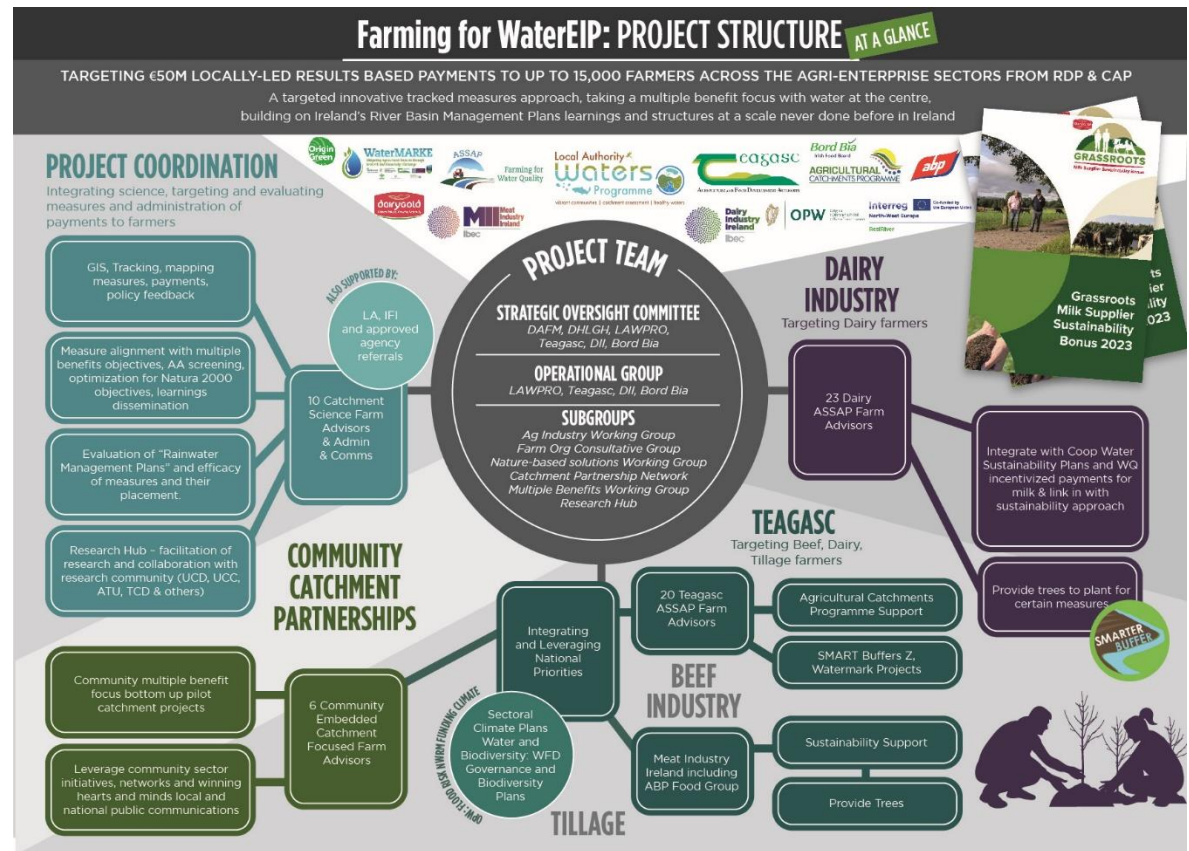
Collaboration with Local Authorities

Process to be worked out



Other Potential Agency Collaborations will be explored throughout the project for complementarity

- Natural Water Retention Measures
- Nature Based Solutions to manage road runoff /flooding
- Drinking water/ source protection
- Fisheries enhancement
- More collaborations?





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Thank You

Questions may be asked through the SLIDO app using the QR code on the rear of your lanyard