



Diane Foster  
Source to Tap Project Manager

# About

Source



to



Tap



The 'Source to Tap' project is an innovative €5.3m cross-border project to protect and improve the rivers and lakes within the Derg and Erne catchments.

The "Source to Tap" project, is funded by the EU's INTERREG VA programme through the Special EU Programmes Body (SEUPB) together with funding from the Department for Agriculture, Environment and Rural Affairs (DAERA) in Northern Ireland and the Department for Housing, Planning and Local Government (DHPLG) in Ireland. Northern Ireland Water is the lead Partner working in collaboration with Irish Water/Uisce Éireann, Agri-Food and Biosciences Institute (AFBI), East Border Region, Ulster University and The Rivers Trust, to explore measures to improve local water quality.



# Project Aim

“to explore sustainable, cost effective measures to reduce pollution in shared catchments, and to secure safe drinking water sources and contribute to improvements in cross border raw water quality.”



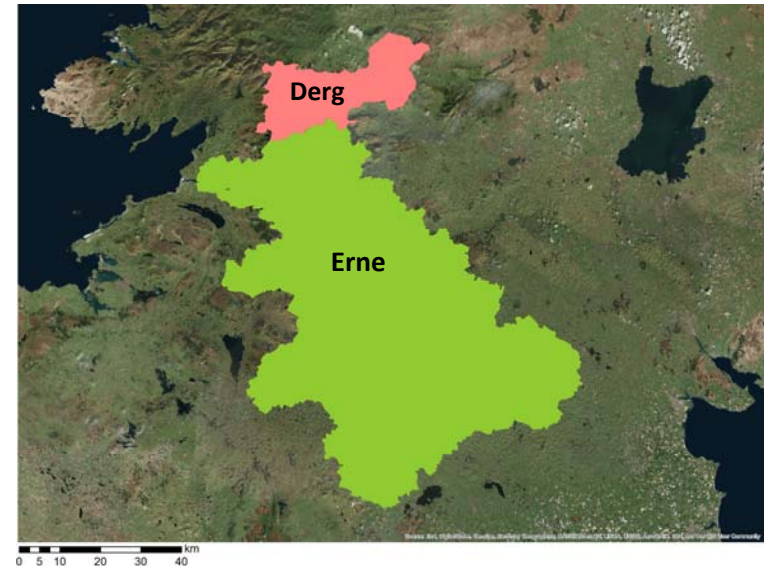
Leading to the production of a SCAMP

# The Erne and Derg River Catchments

**Erne** - Supplies Killyhevlin / Belleek & Ballyshannon WTW (future)

Catchment spans 4374 km<sup>2</sup>

- 45% in NI, 55% in ROI
- Areas of peat and forest in upper reaches
- Large areas of grassland agriculture
- Towns and industry
- Leisure industry on L Erne
- **Main issues:**
- Pesticides, particularly **MCPA**
- Nutrients – Agriculture and septic tanks
- **Colour**
- **Turbidity**
- Invasive Species
- Taste/Odour



**Derg** - Supplies Derg WTW

- Catchment spans 438 km<sup>2</sup>
- 66% in NI, 34% in ROI
- Peat and forestry in upper reaches
- Intensive agriculture in lower reaches
- **Main Issues:**
- Pesticides, particularly **MCPA**
- High **colour and turbidity** in flood conditions
- Ammonia pollution from animal slurry



# The project will cover five areas

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love your water

 source to tap  
learning for water

 source to tap  
peatlands for water

 source to tap  
forests for water

 source to tap  
farming for water

Best practice will help form a Sustainable Catchment Area Management Plan (known as a SCAMP), so that what is learnt, and is shown to work well, can be replicated in other drinking water source areas in the United Kingdom, Ireland and beyond.



# Citizen-science water quality monitoring



- 💧 Require 36 volunteers trained to monitor riverfly life
- 💧 Community-led water quality monitoring team
- 💧 Knowledge legacy...beyond the life of the project



# What has been happening?

- 💧 Riverfly Monitoring equipment has been procured
- 💧 Volunteers have been sought
- 💧 Riverfly training has been rolled out in Erne & Derg catchments in September 2018 with 28 volunteers trained.
- 💧 Derg area - some more volunteers would be welcome



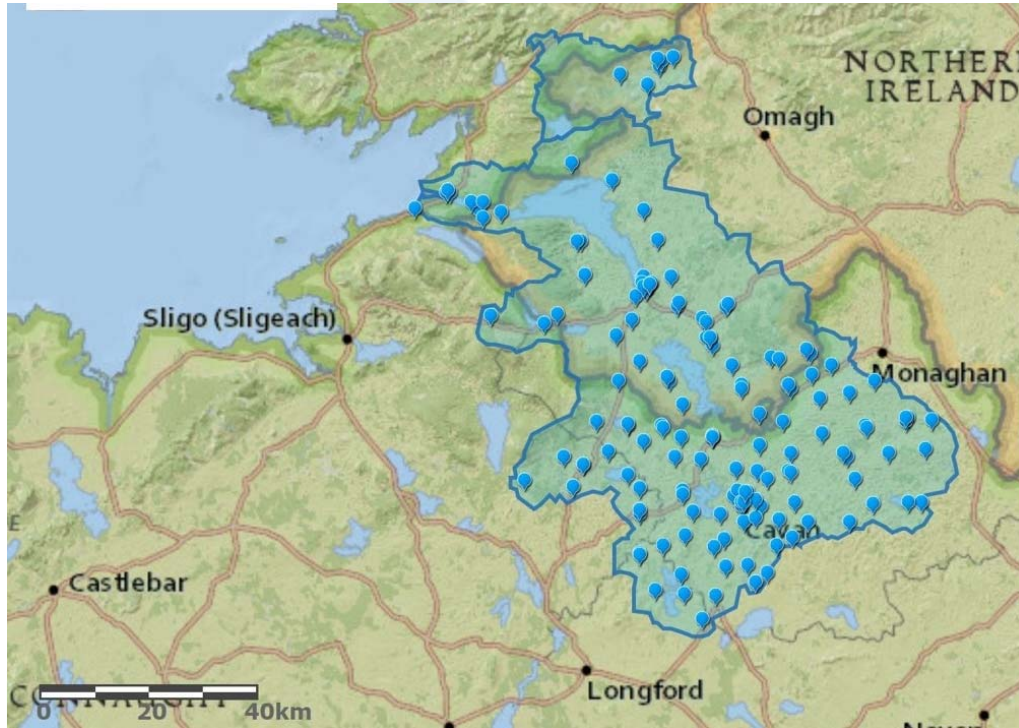




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# Learning for Water



## 💧 General Engagement

48 Information Exchange Events,  
24 Road show Events and  
Agricultural Shows etc.

## 💧 Schools Education Programme





# What has been happening?

- 🍃 Met with other education providers – Derrygonnelly Field Centre, NI Water Education team, Lough's Agency, Dundalk Institute, Inland Fisheries Ireland
- 🍃 Activity Booklet produced – 5 units – schools can sign up to all or just some of the units
- 🍃 School visits started in September 2018



# 8 Roadshows



**source to tap**

Find out what's special about the River Erne and Derg Systems...  
Meet the Source to Tap Project team...  
Learn about the quality of your drinking water resource...  
Come along to the Termon Complex, Pettigo, Co. Donegal

**Source to Tap Roadshow Event**

Do you have an interest in the rivers and lakes in the Erne and Derg catchment areas? Then come along to meet other like-minded individuals. A presentation on the Source to Tap project will be followed by a discussion around raising awareness of the importance of protecting our precious drinking water resource and how YOU can get involved. Light refreshments will be provided.

Organised by the Source to Tap team.  
Visit our website: [www.sourcetotap.eu](http://www.sourcetotap.eu)

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**Interreg** European Regional Development Fund  
The Source to Tap project is supported by the European Union's INTERREG IIIA Programme, managed by the Special EU Programme Body (SEUPB).



💧 Roadshows to raise awareness of the Source to Tap Project and to help people make the connection between what comes out of their tap and our river and lake water.

💧 Held in:

- Ballinamore, Co. Leitrim
- Enniskillen, Co. Fermanagh
- Clones, Co. Monaghan
- Tanagh Co. Monaghan
- Cavan Town, Co. Cavan
- Cootehill, Co. Cavan
- Castlederg, Co. Tyrone
- Killeter, Co. Tyrone



# Information Exchange Events



Information Exchange events to identify pressures on the freshwater environment and develop a community led vision for the project.

- 💧 Derg Valley Leisure Centre Castlederg
- 💧 Killeter Heritage Centre
- 💧 Ballybay Wetlands Centre
- 💧 Ballinamore Library
- 💧 Ulster Canal Stores, Clones
- 💧 Enniskillen Library
- 💧 The LCC Belcoo
- 💧 Johnston Central Library, Cavan



# Networking event March 2018

Aim to get other projects in the room to identify synergies and opportunities.

Presentations From:

- 💧 Source to Tap
- 💧 Co-operating Across the Borders for Biodiversity (CABB Project)
- 💧 Lough Erne Landscape Partnership
- 💧 Boa Island Breeding Wader Project
- 💧 Waters and Communities
- 💧 Catchment Care
- 💧 Grassroots Challenge
- 💧 Waterways Ireland/Queens University Belfast- PhD in fresh water invasive species





# Other events

We have participated in various other events such as:

- 💧 Information stand at Balmoral Show on the DAERA stand with Ballinderry Rivers' Trust 'River in a Box'
- 💧 Information stand at Teagasc pesticide event
- 💧 Information stand at Cavan Tidy Towns – Networking for Nature Event
- 💧 Talk given to Rockcorry ICA
- 💧 Agricultural Shows – Fermanagh, Omagh, Finn Valley, Tullamore Ploughing Championships





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peatlands for water





# Peatland for Water

## 'Peatlands for Water'

**What?** Restoring an area of previously forested peatland to improve the health of the bog and reduce soil run-off to rivers and lakes.

**How?** Restoration of 135ha of previously afforested peat bog areas adjacent to watercourses on Forest Service NI land to provide peat dams preventing sediment run-off into rivers in the Erne and Derg Catchments.

**Why?** To improve habitats and water quality through reduced erosion and sediment run-off, which will contribute to improved WFD status.



# What has been happening?

- 💧 Met with Forest Service NI – potential sites sent through
- 💧 Discussions with Procurement team underway
- 💧 Site Visits Undertaken
- 💧 More discussions planned



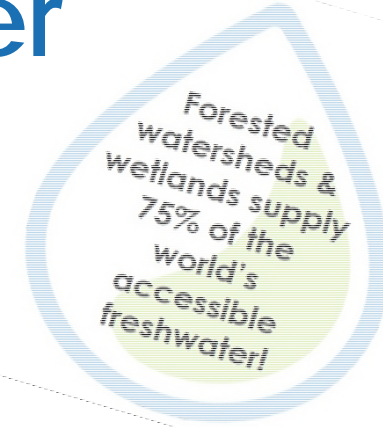


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forests for water



# Forests for Water

## 'Forests for Water'



**What?** Trialling various mitigation measures to reduce soil erosion and sediment run-off to our rivers and lakes from forestry activity.

**How?** Through the construction of settlement ponds/sediment traps of different sizes and filtering of the runoff from the forestry operation sites through various media – e.g. straw bales.

**Why?** To reduce forestry impacts where there is a risk to raw water quality.

# What has been happening?



- Meetings held with Forest Service and Coillte to discuss the pilot
- Site visit with Forest Service NI to understand the harvesting process when felling is underway
- Meetings to choose sites and discuss suitable mechanisms with Forest Service and Coillte
- Investigating the procurement options





# Why - Agricultural Opportunities

## Bankside erosion

Sediment loss leading to high colour and turbidity.

## Pesticides

High MCPA concentration in raw water.

## Costs

High costs for Granular Activated Carbon (GAC) filter regeneration at Water Treatment Works to remove Pesticides.



# Scheme Booklet Developed

- Scheme Produced by RSK Adas
- Offer grants to farmers upstream of Derg WTW
- Cross Checks with DAERA/DAFM
- WEMP template developed
- Scheme launched at the end of July 2018 with support from the Farmers Unions
- Over 50 farm visits carried and around 90 farmers expressed an interest to date.

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farming for water

**Agricultural Grants**  
available at  
**100% Funding\***

**River Derg**  
Pilot Cross-border  
**Land Incentive Scheme**

The quality of the water that comes out of your tap is of a high standard and meets all the required standards. However, our water quality monitoring programme has detected high residual levels of grassland pesticides and sediment in the water entering the Derg Water Treatment Works before treatment. The pesticide - MCPA and the sediment has been difficult and expensive to remove in order to continually meet drinking water quality standards. Therefore, it is in everyone's best interests to find a solution that improves water in the Derg River, without negatively impacting on farm productivity.

\*Up to €20,000 stg per farm business in Northern Ireland / €23,000 euro per farm business in Ireland

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www.sourcetotap.eu

Department of Agriculture, Environment and Rural Affairs

**Interreg**  
Northern Ireland - Ireland - Scotland

An Binn Tréacha, Páirde agus Meáin Áise  
Equipment, Planning and Local Government

The Source to Tap project is supported by the European Union's INTERREG VA Programme, managed by the Special EU Programmes Body (SEUPB).





# Training

PO's have been trained in:

- 🌿 PA1, PA2F Pesticide Training and are due to take PA6W
- 🌿 Pinpoint training on how to undertake WEMP's
- 🌿 Farm Advisory mentoring visits in Clitheroe



# Monitoring and Evaluation



# What has been happening?



AWQMS installed

Refrigerated samplers for MCPA

Water level recorders

Sondes (fDOM, turbidity) installed

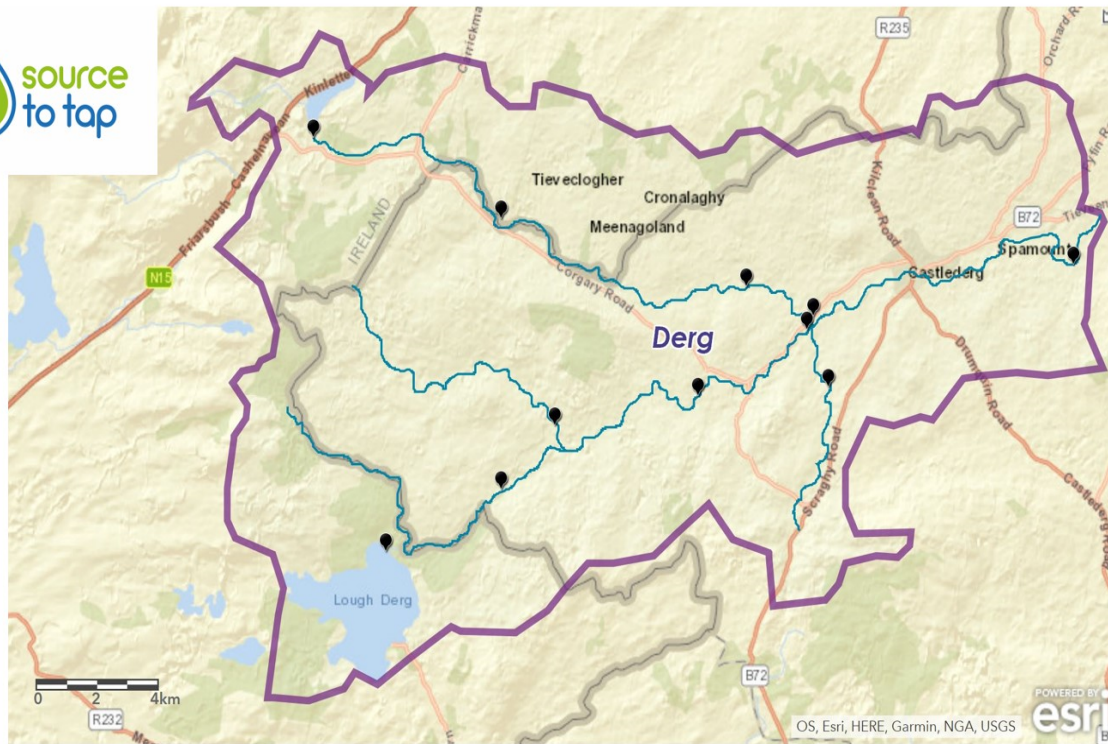
Derg Intervention catchment

Finn Control catchment





# Derg Spatial Sampling Survey



- 💧 In 2018, weekly spot samples collected from April to end June.
- 💧 Herbicides analysed for.
- 💧 Hotspots identified.



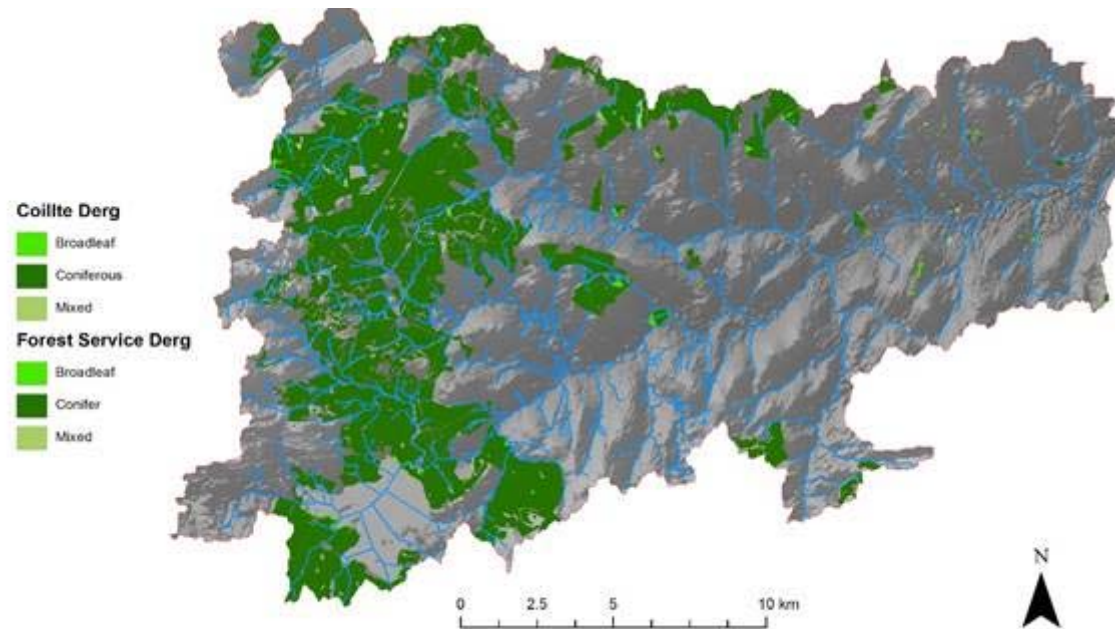


# CENIT



- 💧 CENIT Two year study is now underway
- 💧 AFBI Hillsborough site
- 💧 6 hydrologically isolated 0.2 ha grassland fields on a poorly drained slope.
- 💧 Objective is to understand how long MCPA takes to degrade under Irish field conditions.

# Risk Assessments



AFBI have been busy producing risk maps for the Erne and Derg:

- the forestry and field risk maps will be based on hydrological risk derived from the Topographic Wetness index.
- lack of the high resolution nextmap data for the Erne limits the accuracy of the map for this catchment.
- For the LIS, the risk maps will be used to help identify priority farms in the Derg.



# Project Legacy

💧 Awareness by local communities of the importance of protecting our shared drinking water resources.



💧 Changed land management practices leading to a reduction in the pesticide and colour and turbidity in our raw water.



💧 Water Environment Management Plan for all farmers who have participated in the Derg intervention catchment.



💧 A best practice guide for sustainable catchment management.



💧 Less pollutants in our raw water means less chemicals required, saving money and working in a more sustainable way.





**Any Questions?**





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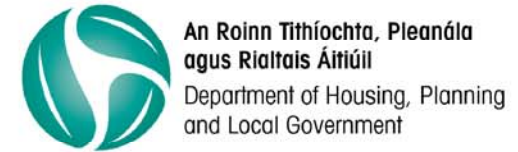


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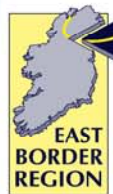


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A project funded by



Project Partners



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