Water Quality in Tipperary
Community Information Meeting – 25th November 2025

Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters

Meeting format

- Suir Catchment – Fran
- Water Quality in Suir – Ruth
- Community Actions in Suir – CWO/MM
- Cabragh Wetlands – Michael Long

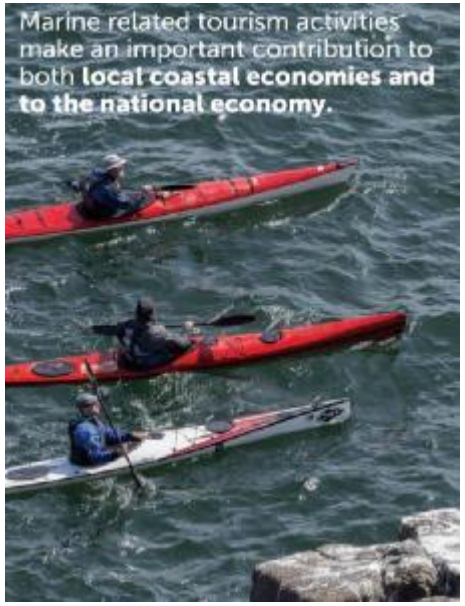
Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters

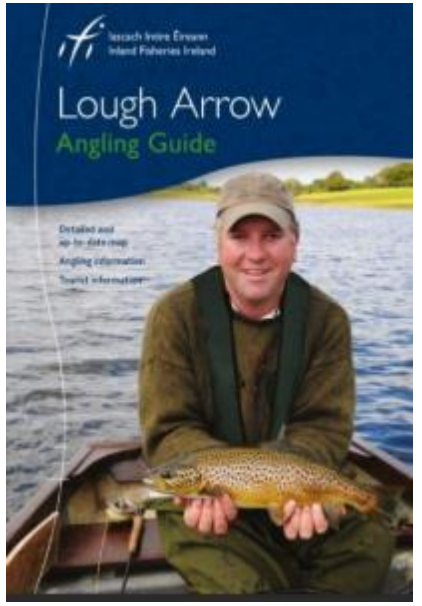
Protecting water quality brings many benefits for Irish society

Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters

Value of water

- Marine tourism
- Angling tourism
- Outdoor recreation
- International market reputation (Origen green)
- Industry / processing
- Drinking water
- …really its' difficult to put a price on clean water



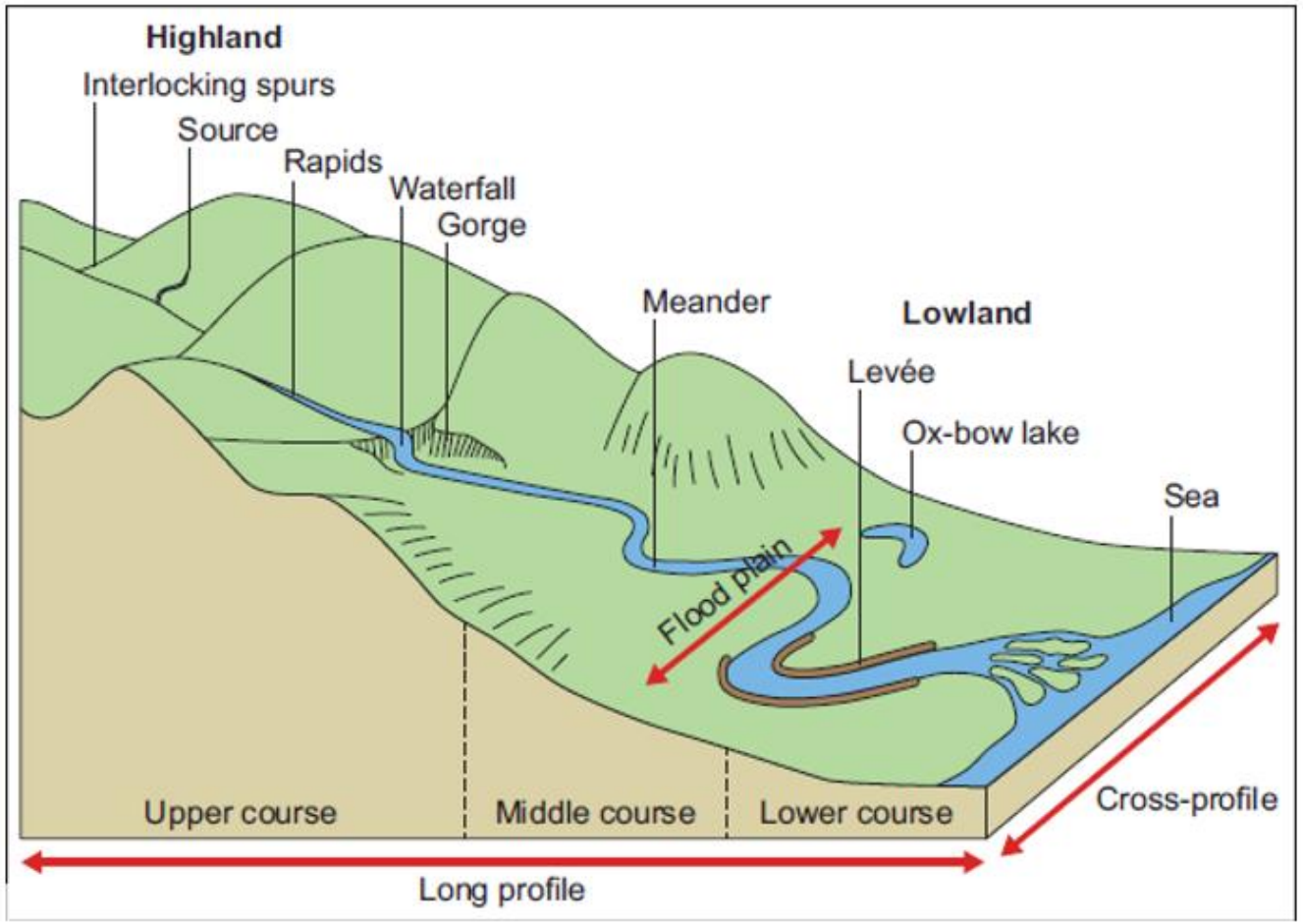


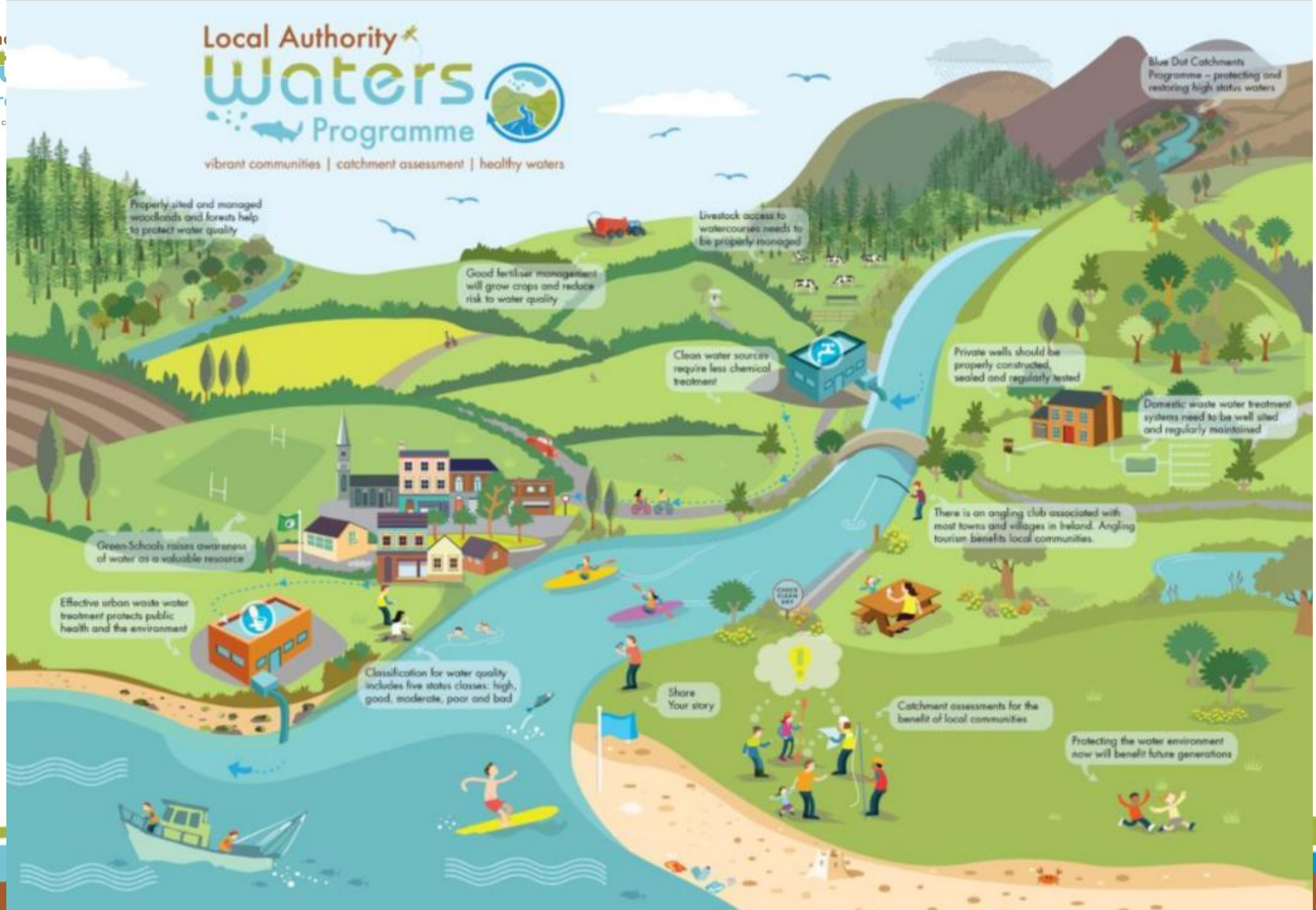
*Economic and Social Research Institute (ESRI) and their 'Angler Panel' project, suggests that over 327,000 adults resident in Ireland like to fish and that Irish anglers alone spent an average of **€630m** a year on their fishing between the years 2018-2020*.*

**Socio-economic Study of Recreational Angling in Ireland*

Understanding Irish Rivers

- Flow
- Slope
- Shape
- Soil / rock (substrate)
- Vegetation
- Type of human activity




Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters
Blue Dot Catchments Programme – protecting and restoring high status waters
Properly sited and managed woodlands and forests help to protect water quality
Livestock access to watercourses needs to be properly managed
Good fertiliser management will grow crops and reduce risk to water quality
Clean water sources require less chemical treatment
Private wells should be properly constructed, sealed and regularly tested
Domestic waste water treatment systems need to be well sited and regularly maintained
There is an angling club associated with most towns and villages in Ireland. Angling tourism benefits local communities.
Green Schools raises awareness of water as a valuable resource
Effective urban waste water treatment protects public health and the environment
Classification for water quality includes five status classes: high, good, moderate, poor and bad
Share Your story
Catchment assessments for the benefit of local communities
Protecting the water environment now will benefit future generations

If we don't take a balanced approach to managing our river – its leads to problems

- Pollution
- Increased flood risk
- Loss of amenity
- Impacts on the local economy
- Biodiversity / Wildlife
- Can even affect housing provision

Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters

Rapid assessment of water quality indicators downstream and upstream of Thurles Bridge on 11/09/24

Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters

Kick sample to look at water quality indicator aquatic bugs

High level of silt evident

Kick sample
taken down stream
of Thurles Bridge on 11/09/24

- Very poor result
- Almost no aquatic life
- A few water shrimps (Gammarus), some biting midge larvae (Simuliium) Extensive Cladophora algae
- No invertebrates typical of clean water such as mayflies or stoneflies - essential food for trout and salmon.

Freshwater shrimp

Blackfly larva

Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters

High level of silt and algae (below) and river weed (above)

High level of silt (below) and river plant growth evident (above) upstream

Weir blocking fish migration in Roscrea

Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters

What kind of problems? …some examples

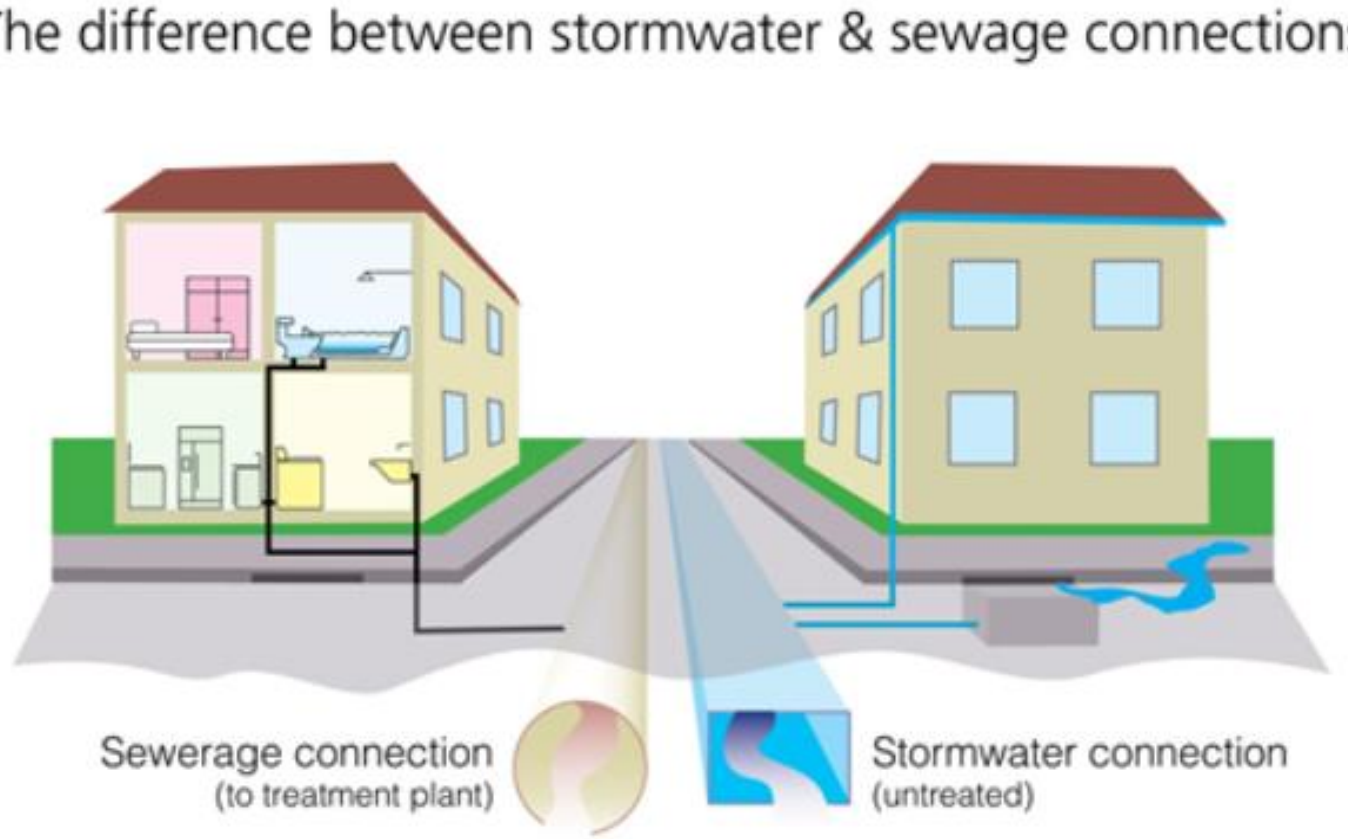
Urban pollution sources

Wastewater

Septic tank

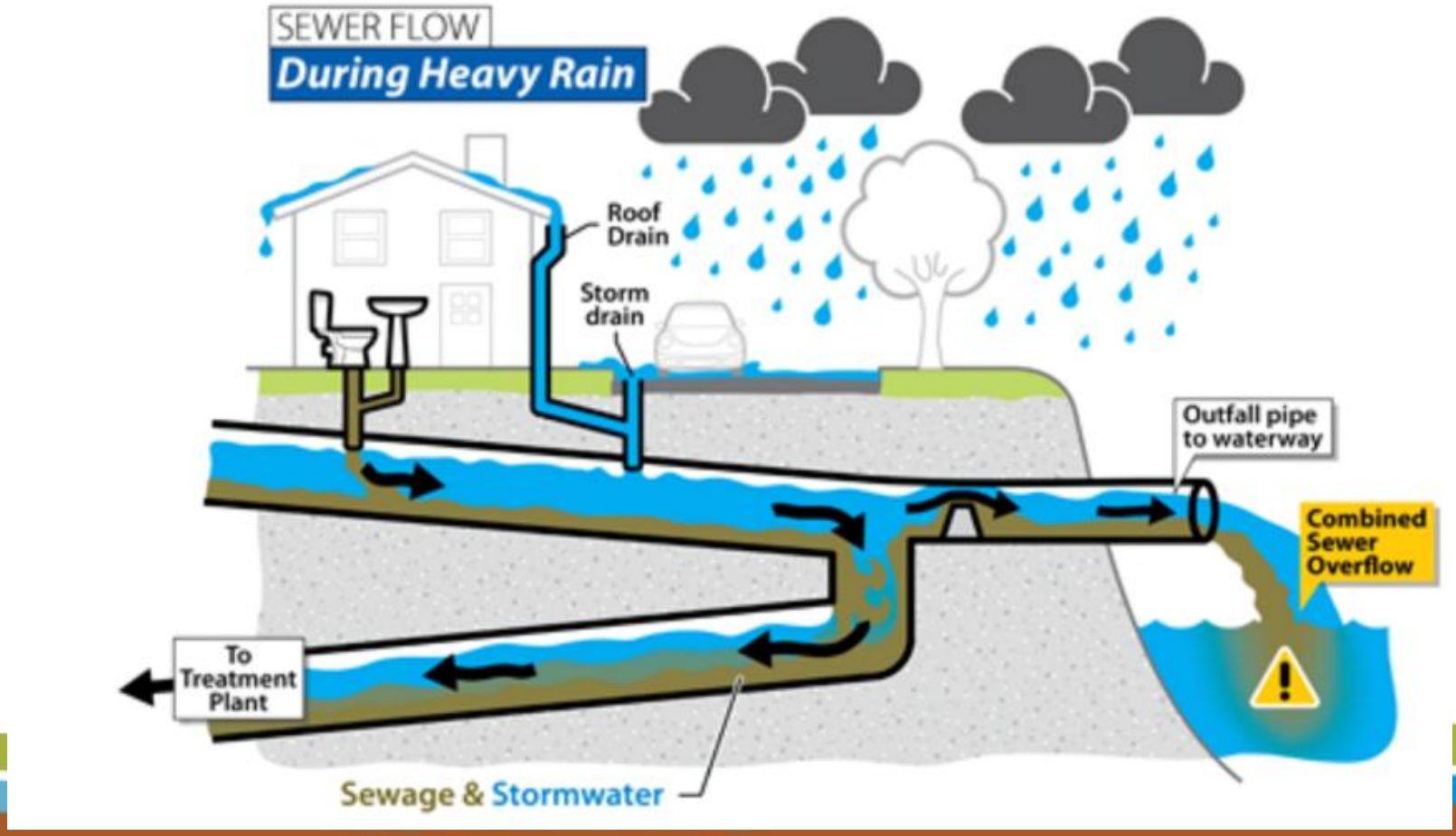
Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters

Sewage and stormwater networks in housing developments



Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters

Older systems stormwater and sewage use the same pipes



Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters

More intense rainfall increases risk to Storm Water and combined Sewer Network i

Increasing volumes of water may exceed design capacity of storm water network (gullies, underground pipes etc).

Combined sewer networks if flooded out will lead to pollution discharges

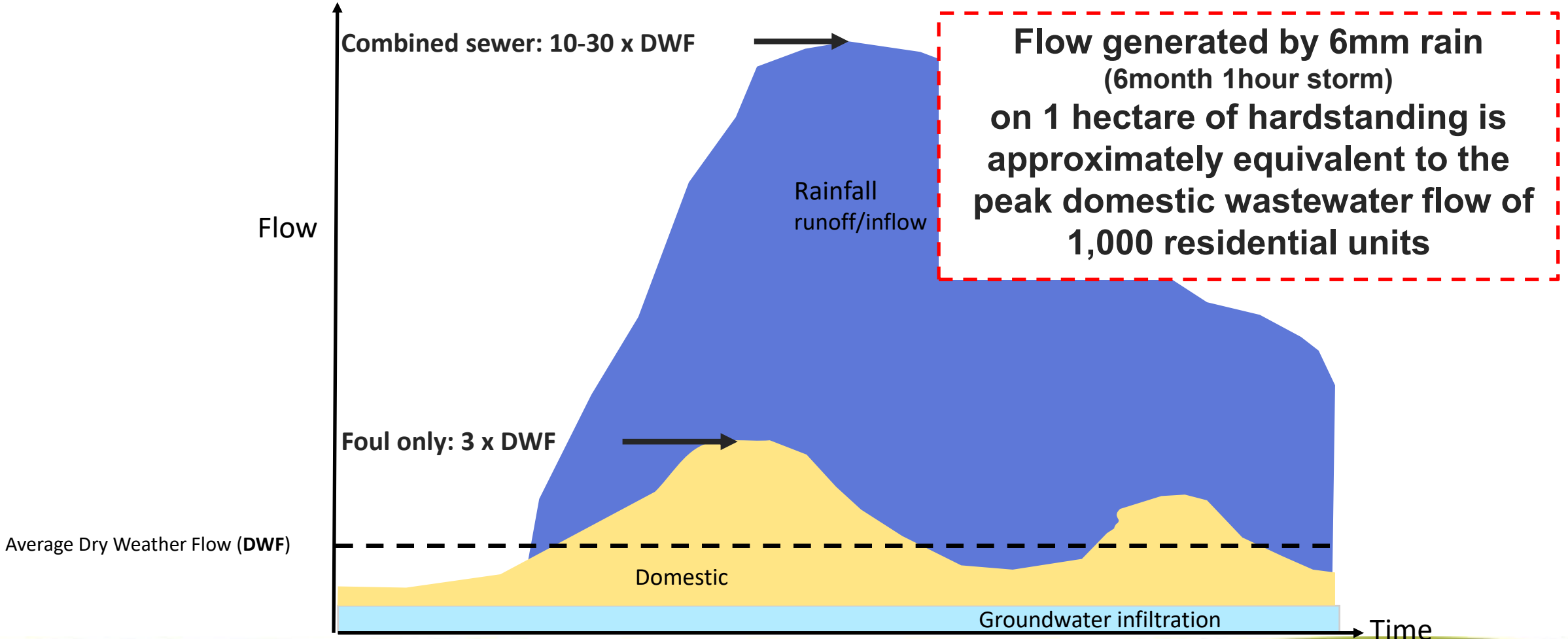
What a combined sewer looks like

Combined sewer

Discharging to a river during rainstorm

Courtesy of Uisce Éireann

Urban Runoff Impact on Wastewater Systems



Slide courtesy Francis Finnerty, Uisce Eireann

Pollution from motor traffic

Barntown, Wexford

Dungarvan, Waterford

Table 2. Sources of pollutants released by vehicular traffic in urban areas.

Specific source	Pollutants released	References
Vehicle operation		
Exhaust gases and particles	Hydrocarbons, PAHs, NOx, Ni, BTEX	Markiewicz et al. (2017); Brinkmann (1985); Huber et al. (2016); Kayhanian (2012); Duong and Lee (2011); Liu et al. (2018b)
Catalytic converters	Rh, Pd, Pt	Rauch et al. (2005)
Vehicle wear		
Tires	TSS, Cd, Cu, Zn, PAHs, microplastics	Muschack (1990); Councell et al. (2004); McKenzie et al. (2009); Legret and Pagotto (1999); Kose et al. (2008); Horton et al. (2017a)
Tire studs	W	Huber et al. (2016)
Brakes	TSS, Cd, Cu, Ni, Pb, Sb, Zn, PAHs	McKenzie et al. (2009); Hjortenkrans et al. (2007); Markiewicz et al. (2017)
Engine and vehicle body wear	Cr, Ni	Gupta et al. (1981); Ward (1990)
Body paint	Pb	Kayhanian (2012)
Wheel balance weights	Pb, Fe (steel), Zn	Root (2000); Bleiwas (2006)
Vehicle washing		
Commercial car washing facilities	Pb, Cd, Cr, Zn Phthalates, NPs, NPEOs	Sörme et al. (2001) Björklund (2010)
Road abrasion		
Abrasion by tires (non-studded and studded)	TSS	Hvitved-Jacobson and Yousef (1991); Van Duin et al. (2008) Lindgren (1996)
	PAHs	Markiewicz et al. (2017)
	Microplastics	Magnusson et al. (2016); Horton et al. (2017b); Vijayan et al. (2019a)

Müller et al 2020. The pollution conveyed by urban runoff: A review of sources. Science of the total environment. Vol 709.

Example of Stormflow impact on Clashawley River, Fethard, Co. Tipperary during low flow river water levels, after a localised shower of rain in 2019. *Source J. Gilleran, EFO, IFI Clonmel*

Drainage and land restructuring – if not managed appropriately

and even prior to new drainage in 2013

02/09/14 and even after new drainage

Nature-based solutions and Multiple-benefits

Dr. Fran Igoe: Local Authority Waters Programme. 25/05/23

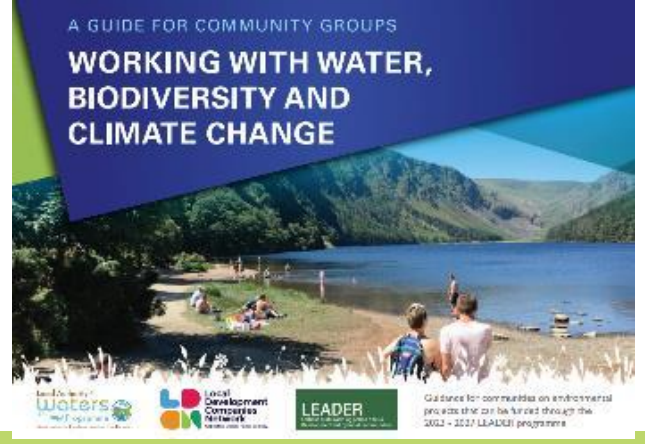

Fish live in trees too!

Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters

If we want a healthy river – then we need to look after it

- Manage human and animal nutrients
- Look after the river form (shape – work with it!)
- Involve all representatives in the local community
- Put together a plan – informed by science and local knowledge

Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters

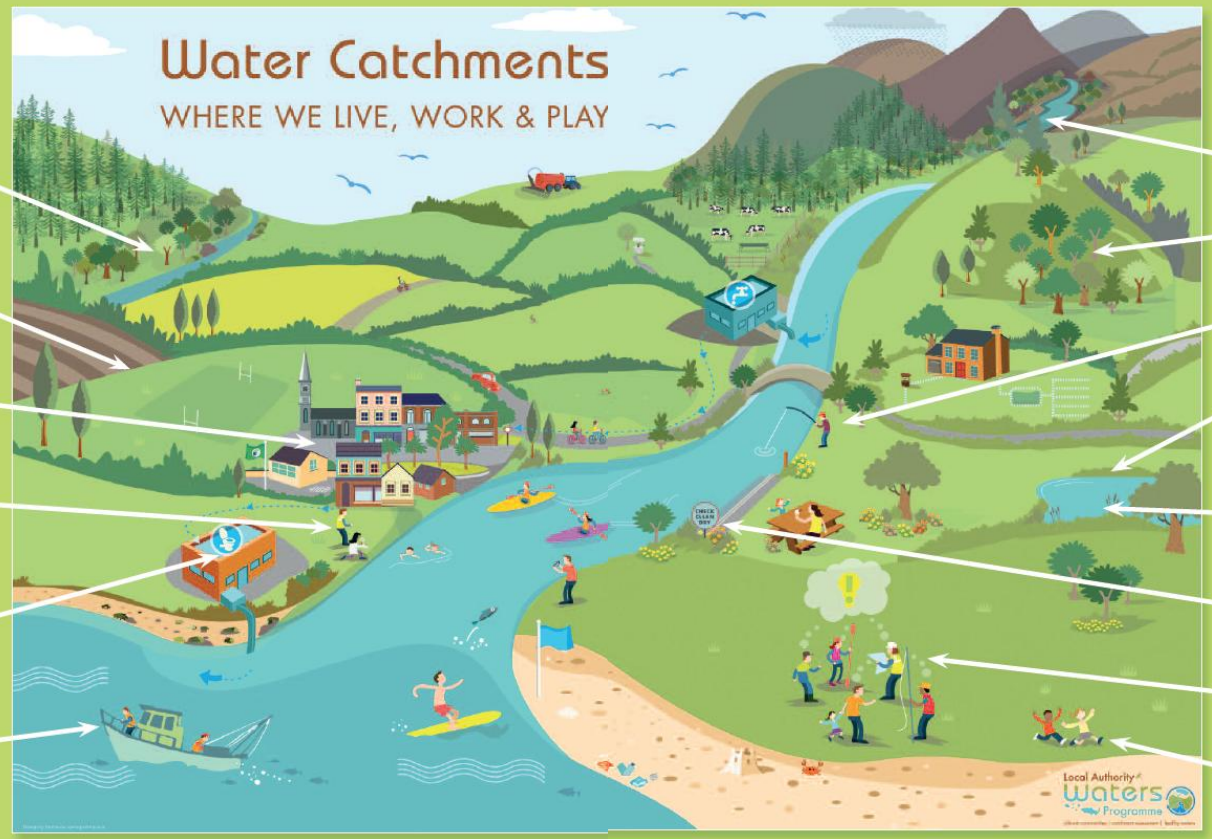


We all can do something

A FEW IDEAS TO HELP WATER, BIODIVERSITY AND CLIMATE

THINK PROJECTS...

- Planting of native wildflowers and vegetation in habitat restoration project
- Silt trapping or 'Slow the Flow" Natural Flood Retention Measures such as the addition of large woody debris to drains
- Rain garden and SuDS
- Innovative techniques for monitoring water quality and biodiversity
- Rainwater harvesting on roof of buildings and use of recycled water
- Coastal or lake nature safari and stewardship project by local fishermen and recreational users



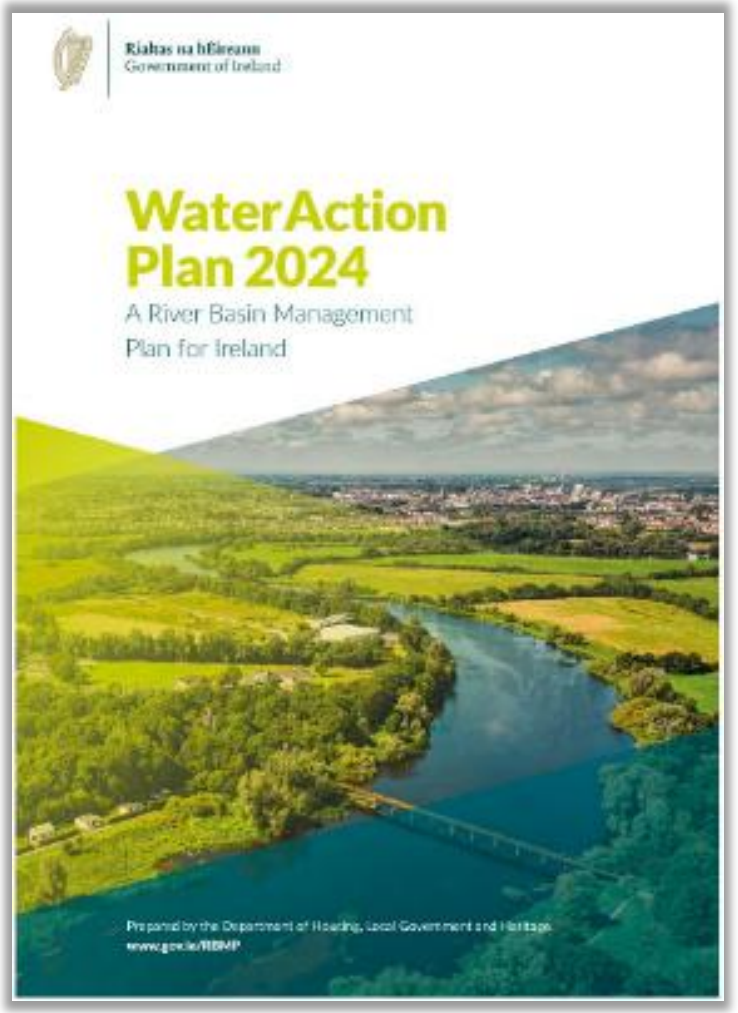
...THINK RIVER CATCHMENTS

- Fish passage project
- Tree planting and riparian biodiversity work
- Citizen science project led by anglers
- Bespoke breeding boxes for birds and mammals
- Wetlands to promote wildlife and reduce pollution and flooding
- Removal of invasive species and biosecurity planning
- Putting a plan together: where it all begins. Feasibility studies and planning involving all of the community in the catchment
- Outdoor biodiversity classroom

Water Action Plan 2024

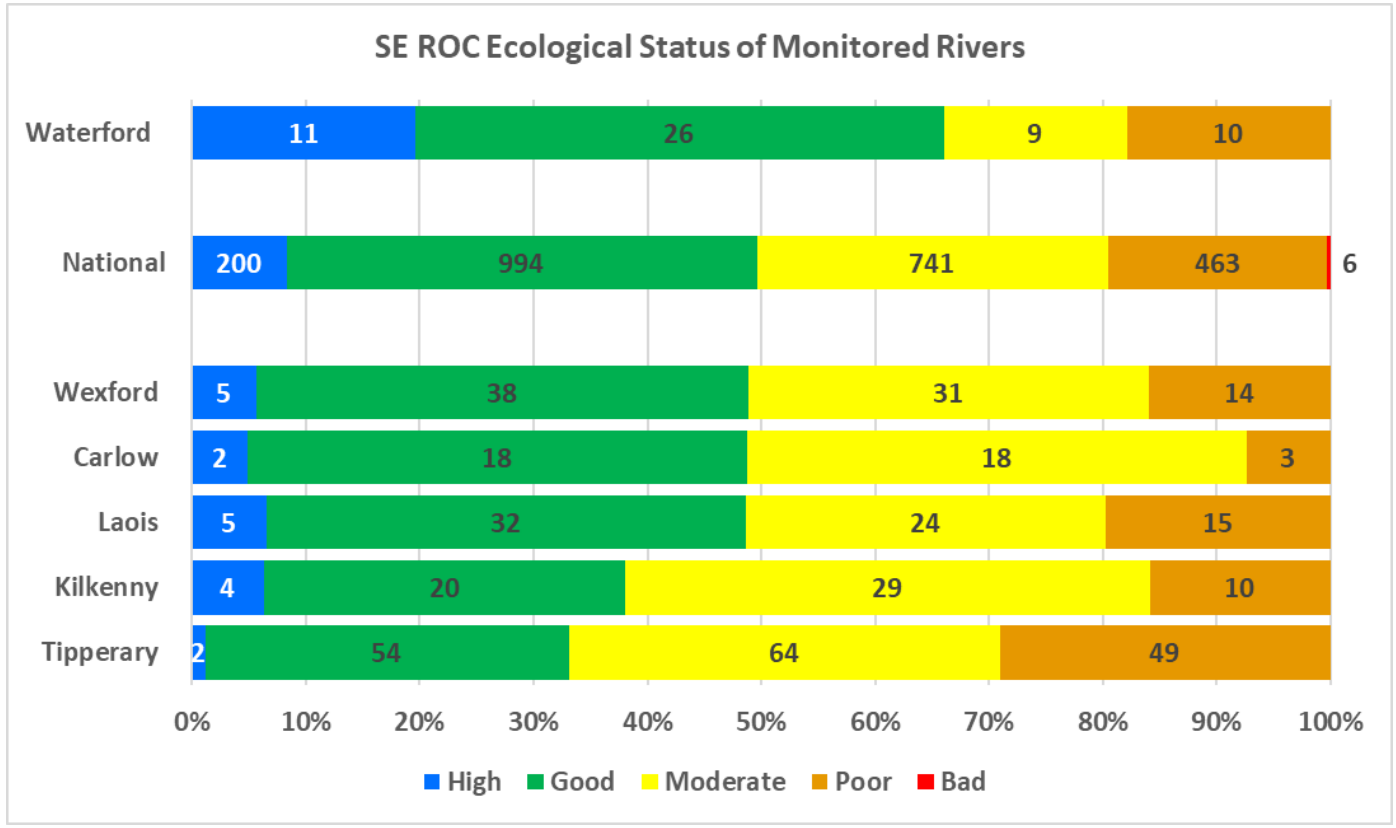
Launched September 2024

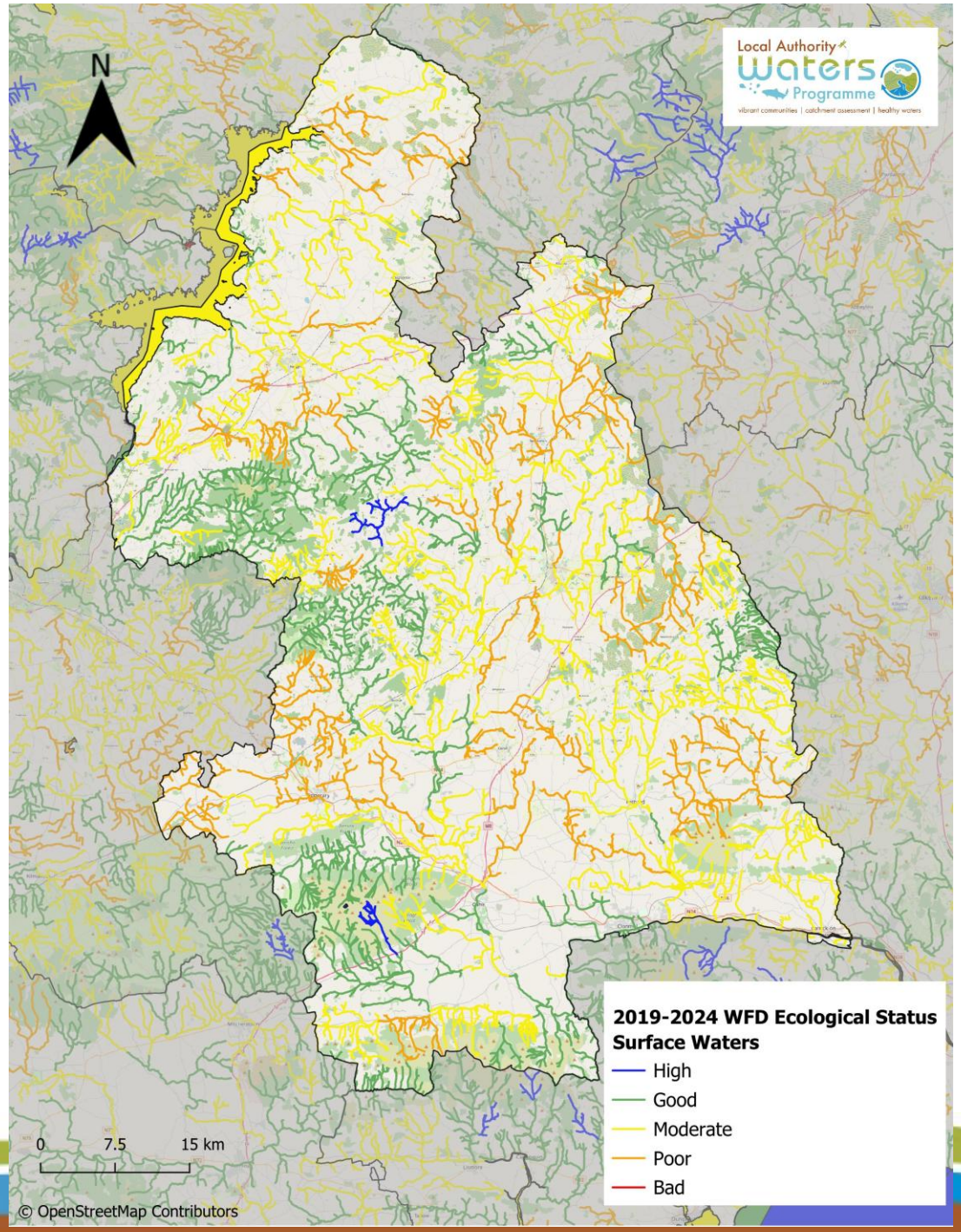
- Government commitment to protecting & restoring Ireland's natural waters by complying with the requirements of the Water Framework Directive
- Accelerate the identification and implementation of the **right measures in the right places** to both restore and protect all water bodies



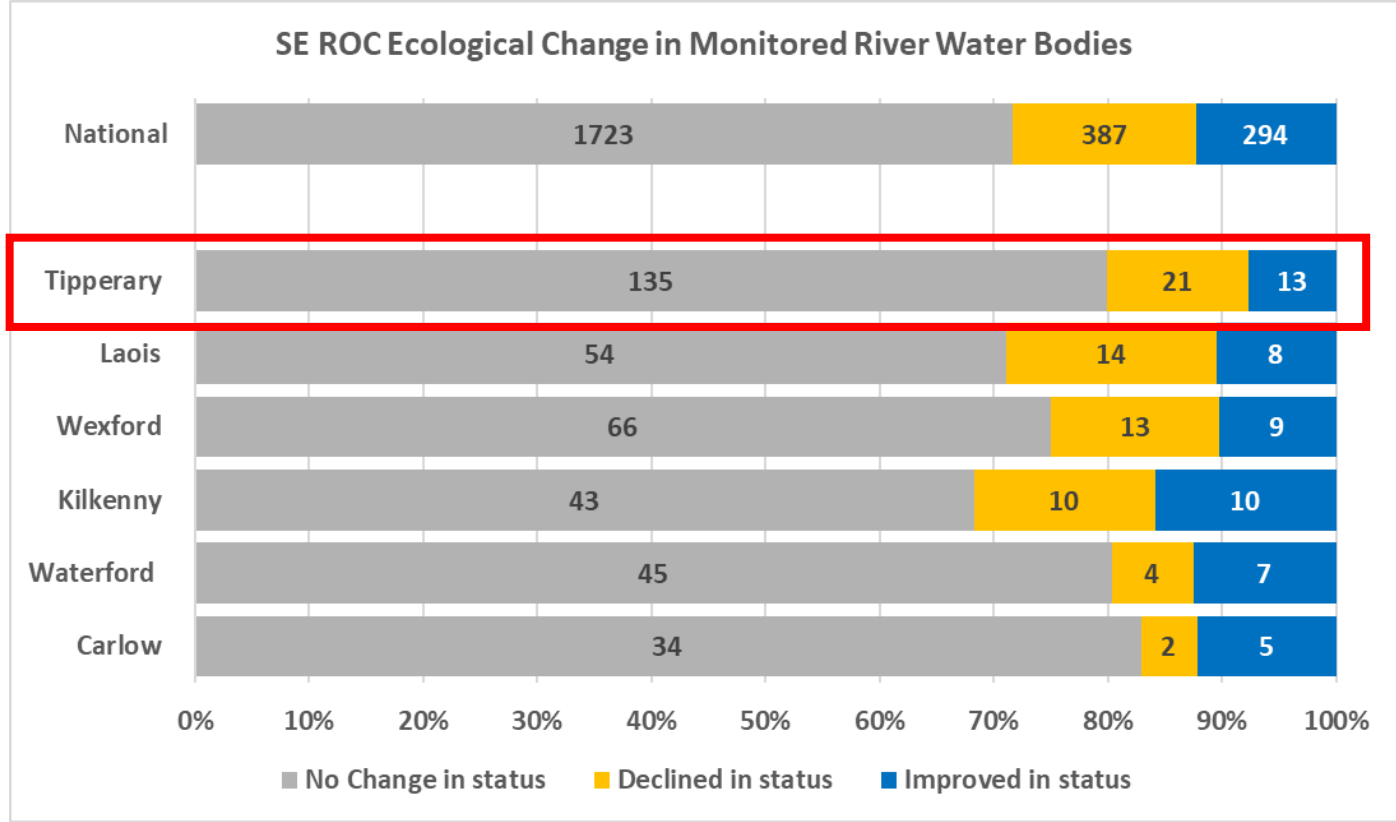
gov.ie - River Basin Management Plan 2022 - 2027

Water Quality In Tipperary





Water Quality Change since 2021

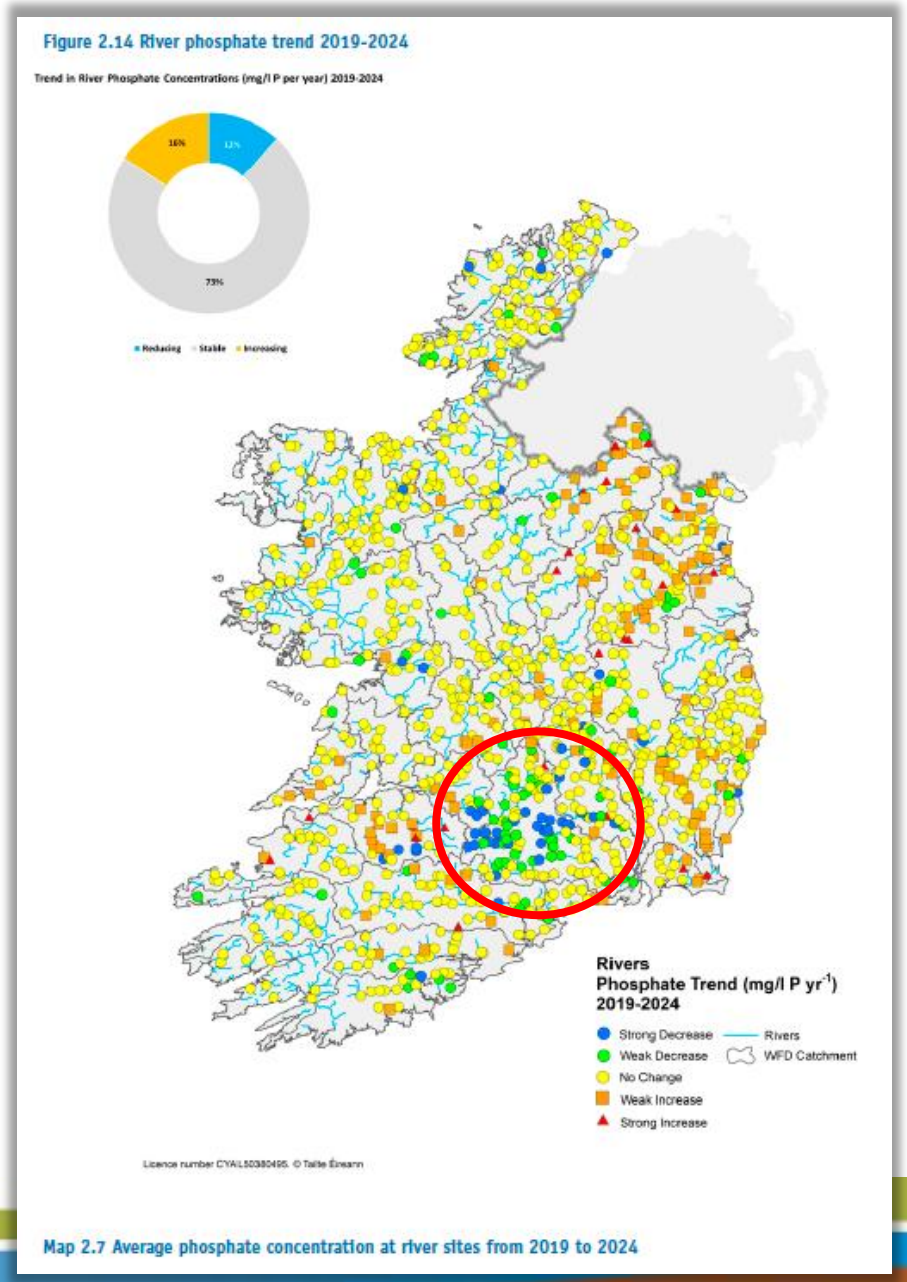


County	No Change in status	Declined in status	Improved in status	Net changes
Carlow	34	2	5	3
Waterford	45	4	7	3
Kilkenny	43	10	10	0
Wexford	66	13	9	-4
Laois	54	14	8	-6
Tipperary	135	21	13	-8

Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters

Some positive news:

- Improvements in Phosphate concentrations in some rivers in Tipperary
- If these improvements continue, status improvements may follow.



Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters

What impacts water quality?

Local Authority Waters Programme
vibrant communities | catchment assessme

Water Catchments

WHERE WE LIVE, WORK & PLAY

Local Authority Waters Programme

vibrant communities | catchment assessment | h

Current Pressures and Impacts

SCALE: ○ National ○ Catchment ○ Subcatchment ◉ Local Authority

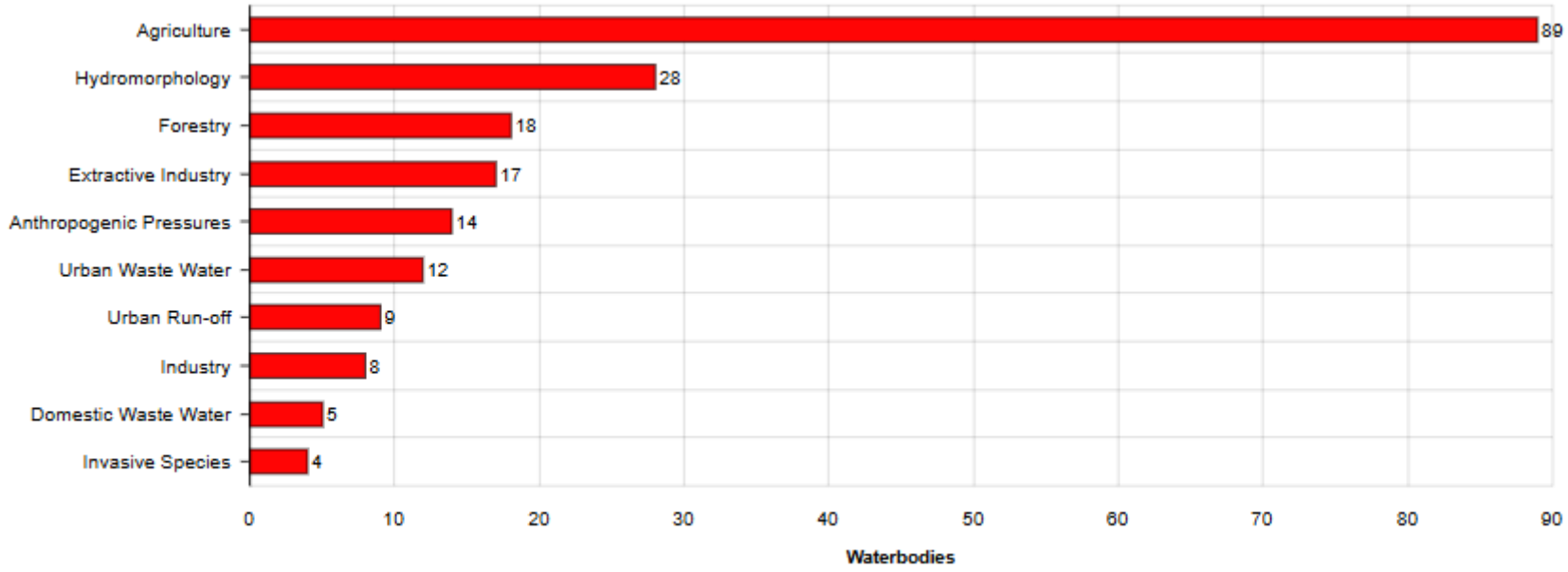
Tipperary County Council

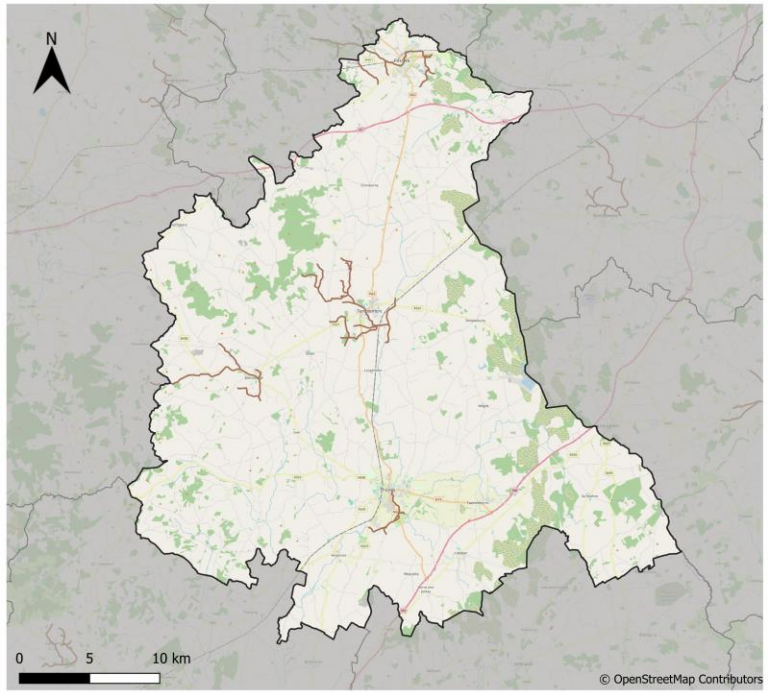
SELECT TYPE:

All Surface Waters

☐ High Ecological Status Objective only

Significant Pressures Impacting At Risk Waterbodies





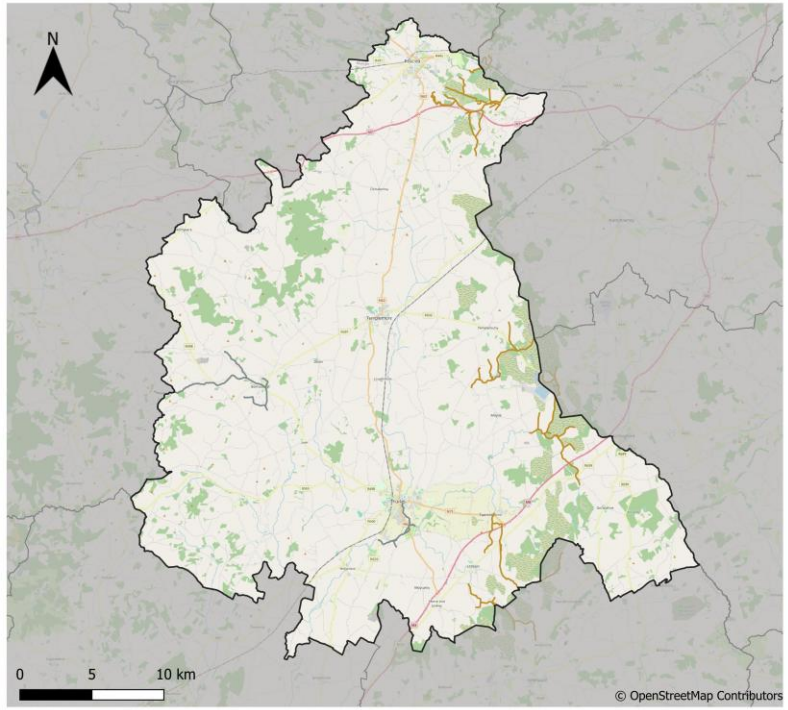
Local Authority Waters Programme

Thurles Municipal District

Pressures on Water Quality

Map Layers

- Thurles Municipal District
- Urban Wastewater Pressure



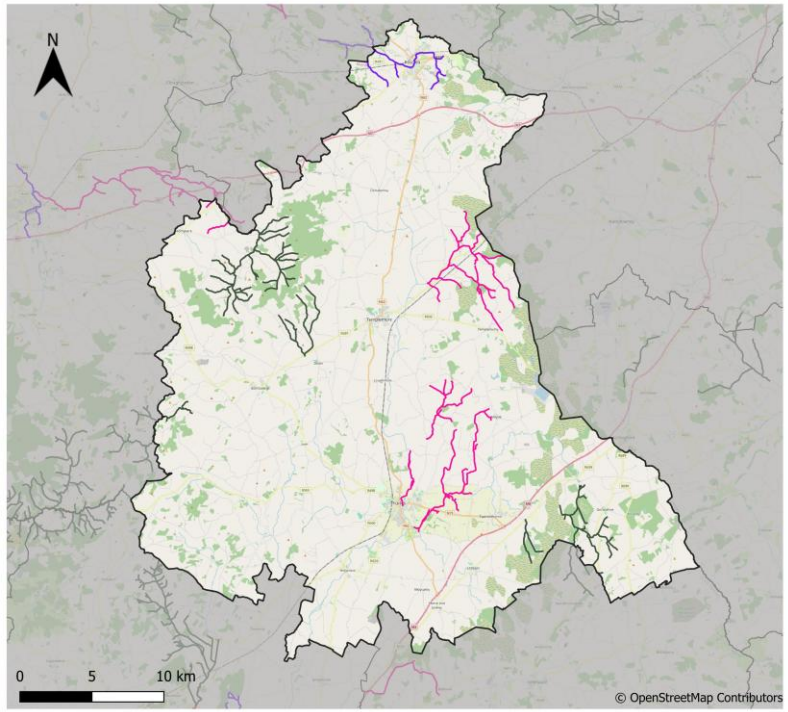
Local Authority Waters Programme

Thurles Municipal District

Pressures on Water Quality

Map Layers

- Thurles Municipal District
- Urban Run Off Pressures
- Peat Pressures



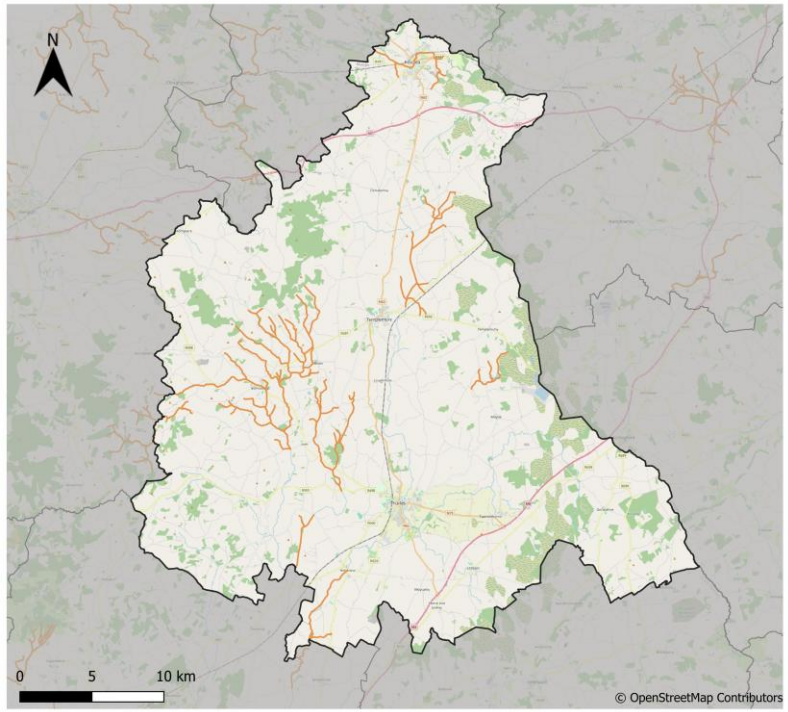
Local Authority Waters Programme

Thurles Municipal District

Pressures on Water Quality

Map Layers

- Thurles Municipal District
- Industry Pressures
- Forestry Pressures
- Unknown Other Pressures



Local Authority Waters Programme

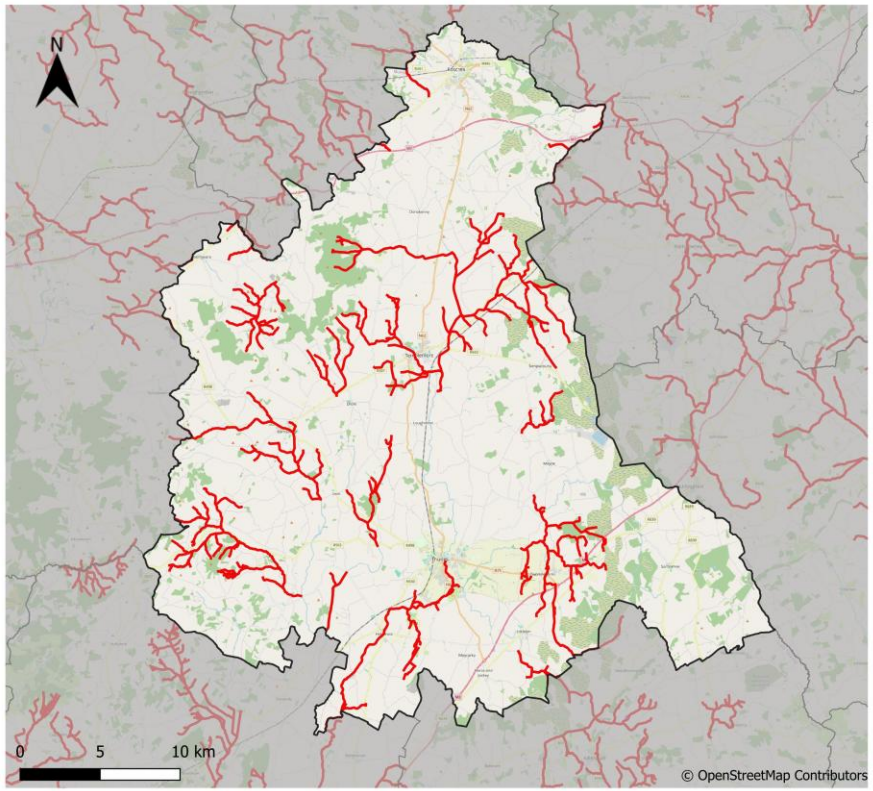
Thurles Municipal District

Pressures on Water Quality

Map Layers

- Thurles Municipal District
- Hydromorphology Pressure

Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters



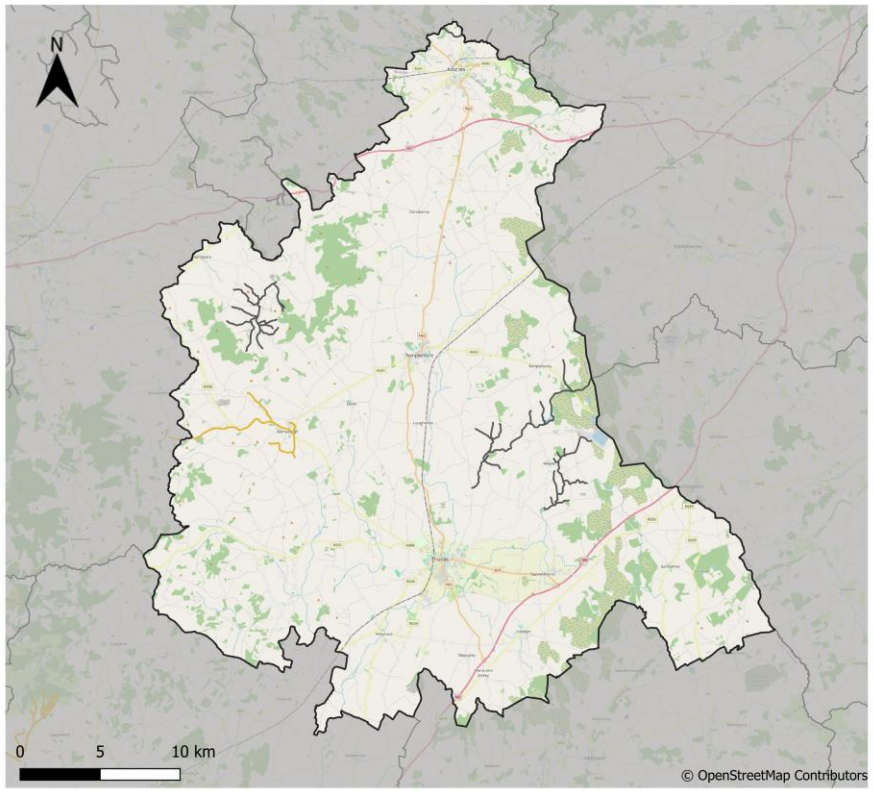
Local Authority Waters Programme

Thurles Municipal District

Pressures on Water Quality

Map Layers

- Thurles Municipal District
- Agriculture Pressures



Local Authority Waters Programme

Thurles Municipal District

Pressures on Water Quality

Map Layers

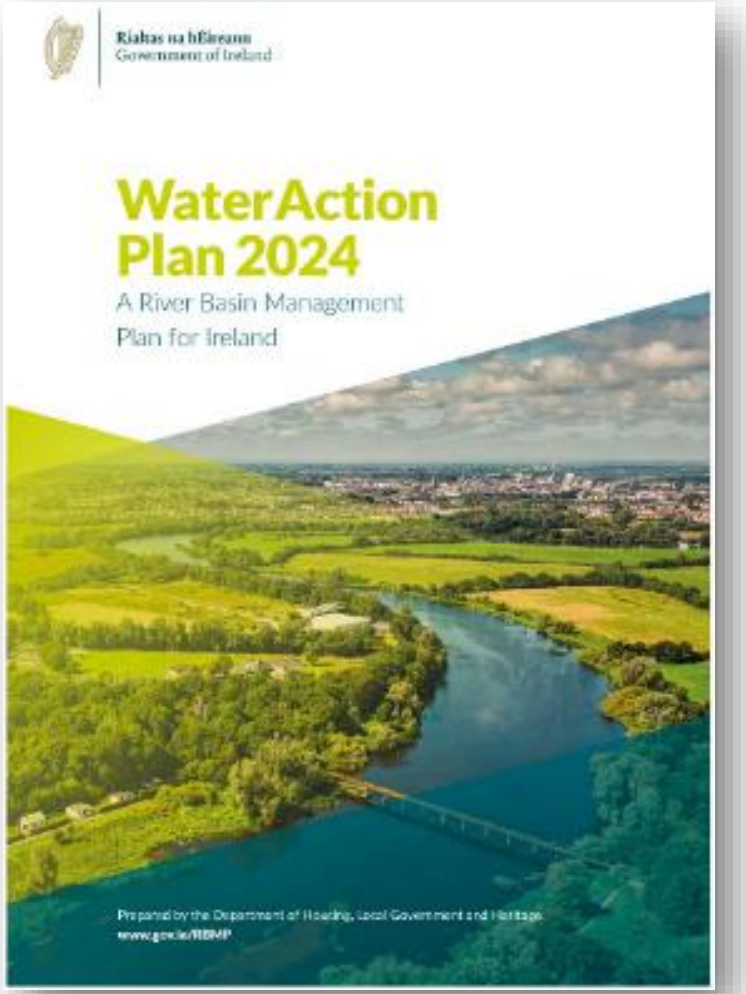
- Thurles Municipal District
- Quarries/ Mines Pressures
- Invasive Species

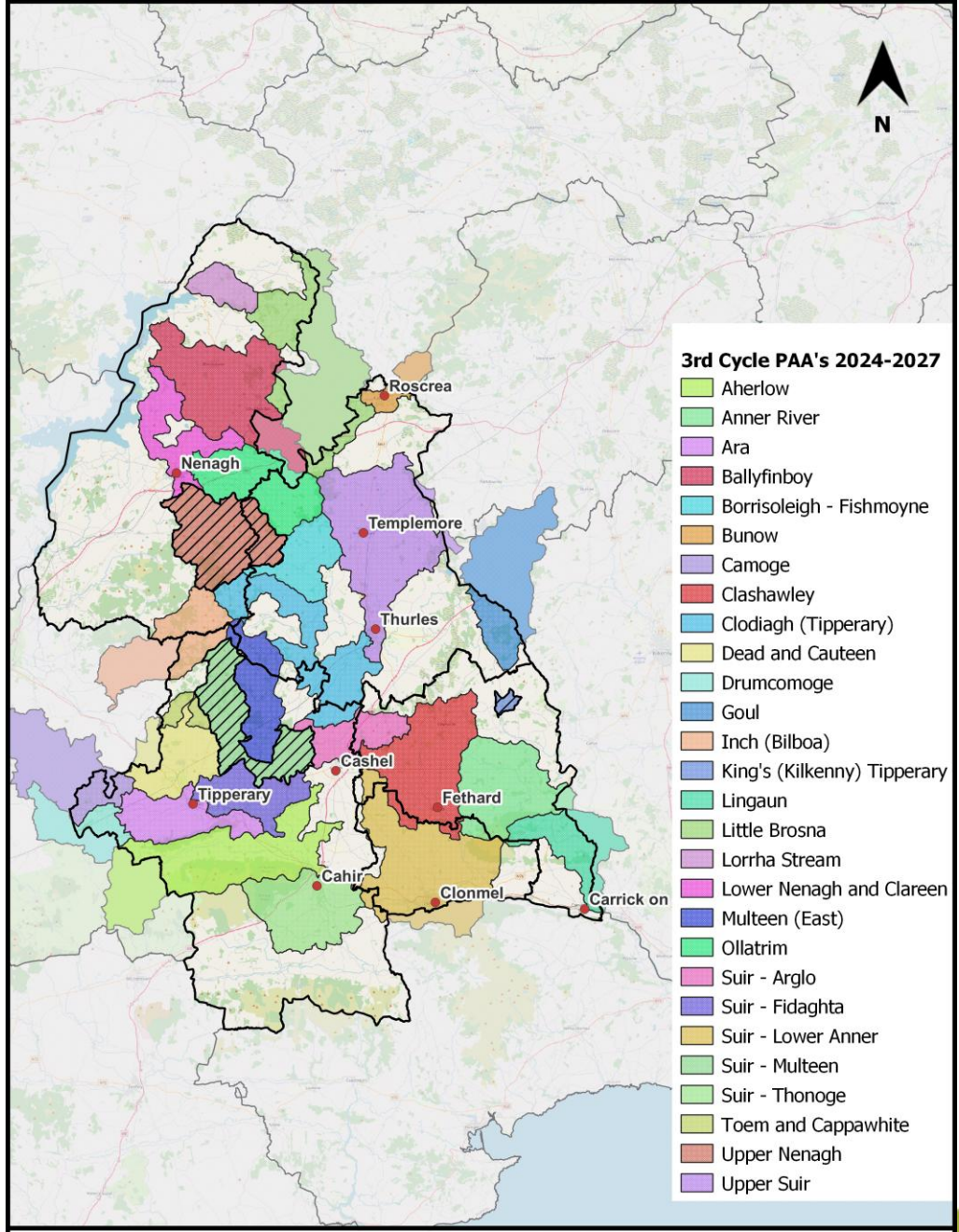
Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters

What are we are doing?

Local Authority Waters Programme

vibrant communities | catchment assessment | healthy waters





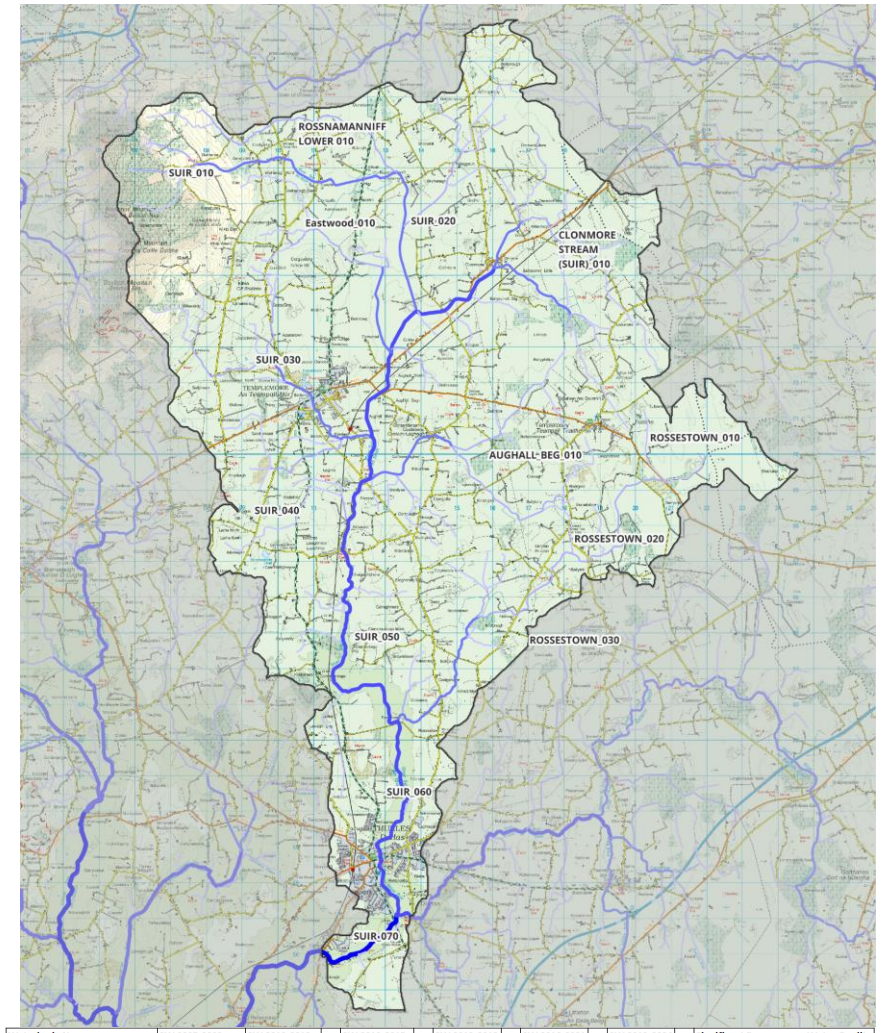
Priority Areas for Action 2024-2027

Local Authority Waters Programme

catchment assessment | healthy waters | vibrant communities

Upper Suir PAA

- Local catchment assessment carried out in 2025
- Fieldwork completed in 9 out of 14 waterbodies
- Urban Waste Water, Agriculture and Hydromorphology identified as potential pressures
- Further monitoring planned to identify source(s) of excess nutrients in the catchment
- Assessment of the remaining 5 waterbodies to be undertaken in 2026



Waterbody Name	SW 2007-2009	SW 2010-2012		SW 2010-2015		SW 2013-2018		SW 2016-2021		SW 2019-2024		Significant Pressures on Water Quality
ROSSNAMANNIFF LOWER 010	Unassigned	Unassigned	↔	Unassigned	↔	Good	↔	Moderate	↓	Moderate	↔	Anthropogenic - Unknown
SUIR_010	Good	Good	↔	Good	↔	Good	↔	Moderate	↓	Moderate	↔	Agriculture - Pasture
Eastwood_010	Unassigned	Unassigned	↔	Unassigned	↔	Poor	↔	Moderate	↑	Moderate	↔	Agriculture - Pasture
SUIR_020	Moderate	Moderate	↔	Poor	↓	Moderate	↑	Poor	↓	Poor	↔	Agriculture - Agriculture Hydromorphology - Channelisation
CLONMORE STREAM (SUIR)_010	Poor	Good	↑	Moderate	↓	Moderate	↔	Moderate	↔	Poor	↓	Agriculture - Pasture Anthropogenic - Unknown
SUIR_030	Poor	Moderate	↑	Moderate	↔	Moderate	↔	Moderate	↔	Poor	↓	Urban wastewater - Templemore Agriculture - Pasture
AUGHALL_BEG_010	Unassigned	Unassigned	↔	Unassigned	↔	Moderate	↔	Moderate	↔	Moderate	↔	Anthropogenic - Unknown
SUIR_040	Unassigned	Unassigned	↔	Unassigned	↔	Good	↔	Moderate	↓	Moderate	↔	Anthropogenic - Unknown
SUIR_050	Good	Good	↔	Good	↔	Good	↔	Good	↔	Good	↔	None identified
ROSSESTOWN_010	Poor	Poor	↔	Poor	↔	Poor	↔	Poor	↔	Poor	↔	Extractive Industry - Mines Extractive Industry - Peat Harvesting
ROSSESTOWN_020	Poor	Poor	↔	Poor	↔	Poor	↔	Poor	↔	Moderate	↑	Extractive Industry - Mines Extractive Industry - Peat Harvesting Hydromorphology - Channelisation Agriculture - Farmyards
ROSSESTOWN_030	Poor	Moderate	↑	Poor	↓	Poor	↔	Poor	↔	Moderate	↑	Extractive Industry - Mines Anthropogenic Pressures - Unknown
SUIR_060	Poor	Poor	↔	Moderate	↑	Moderate	↔	Poor	↓	Poor	↔	Anthropogenic - Unknown
SUIR_070	Poor	Moderate	↑	Good	↑	Moderate	↓	Moderate	↔	Moderate	↔	Urban wastewater - CSOs Agriculture - Pasture Urban run-off - Diffuse sources

Local Catchment Assessment
Finding issues on the ground

Field chemistry and field observations

Biological sampling - invertebrates

River walks

Biological sampling - vegetation

Chemistry sampling

Programme of Measures

- When we find issues, we refer the evidence to the appropriate regulator/ support scheme
  - Agriculture, we refer to ASSAP
  - Forestry, we refer to Forest Service
  - Licensed discharges, we refer to Local Authority or Environmental Protection Agency etc.

- Measures can be implemented to address the issues

Thurles MD – LAWPRO Community Update

- Centenary Thurles Co-op – farmer workshops - 2024
- Engagements and Event – 2025
- Aging of Water – Citizen Science
- Ecology of the River Suir Workshop – November 2025
- Bunow River – Weir Mitigation Project
- Ongoing Funding and Engagement

Centenary Thurles Co-op – Autumn 2024

- Supported Centenary Thurles Co-op in Autumn ’24
- Water quality awareness raising
- ASSAP, Tipperary CoCo
- 2 information sessions
- Clonakenny, Templemore
- 120 Farmers attended

Events & Engagements in 2025

Scoil Eoin Primary School, 4th Class,
talk & Kick Sample, Roscrea - March ‘25

Mid Tipp Low Carbon Community Event
- April ’25, Thurles

Heritage Week Event
– River Suir, Thurles – August ’25
30+ attended

Regular Thurles MD Meetings

Ecology of the Rive Suir – 15th & 16th Nov – Thurles, Loughmore and Castleiney

Dr Ken Whelan, Fisheries Ecologist

Focused on

- What's a healthy catchment?
- Ecology
- Hydromorphology
- Pressures & Solutions

Aging of Water (Trinity College Dublin Project) – Upper Suir – carried out by Thurles Lyons Club members in summer 2025.

About our Funding Streams

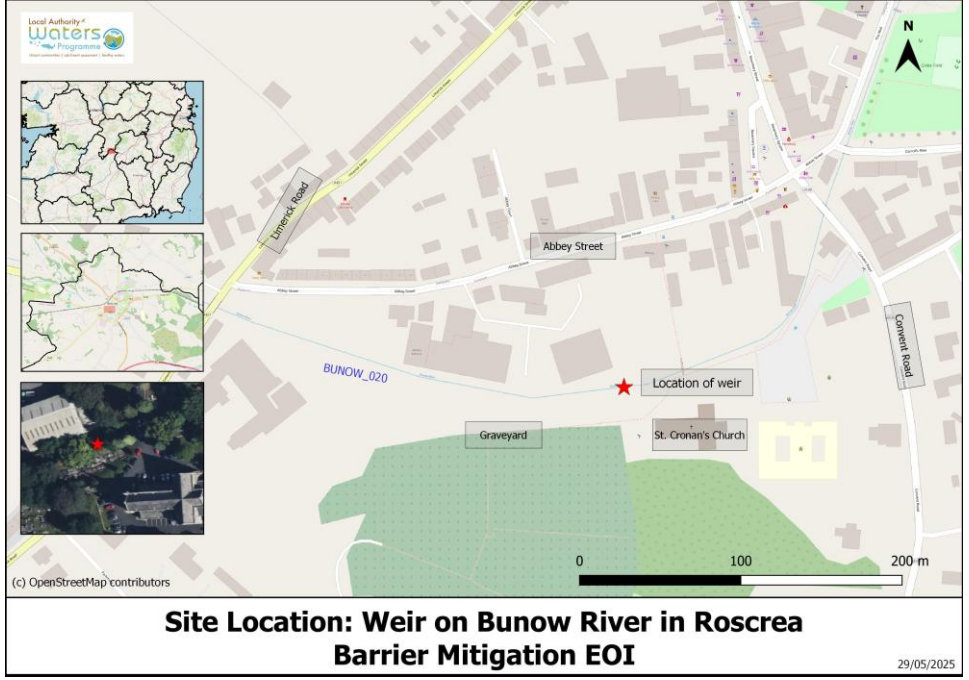
Small Grants and Events Scheme: for Smaller Works Education and Awareness - up to €5,000

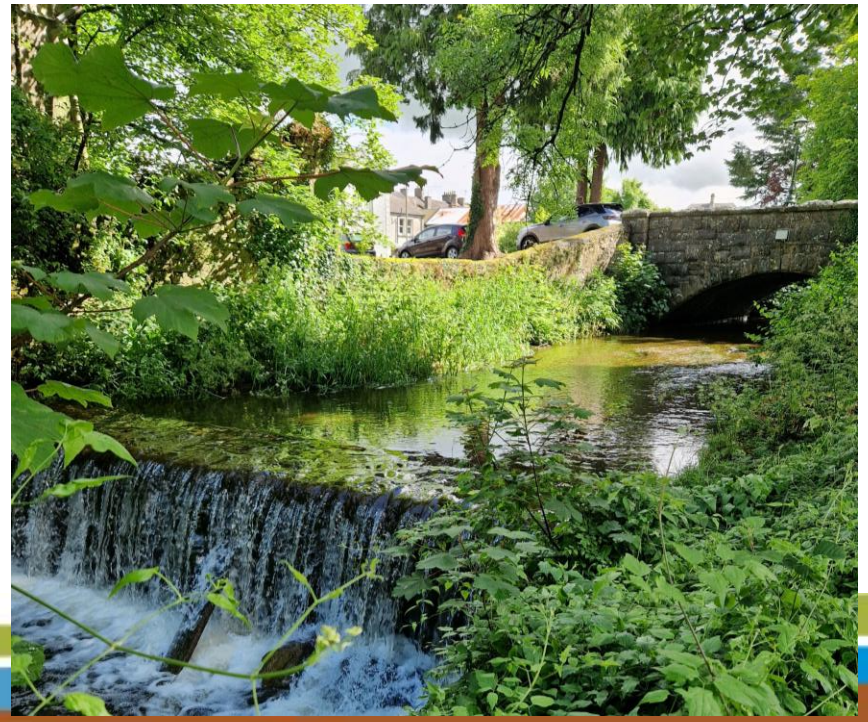
Community Water Development Fund – OPEN Restoration/Protection Projects - €5,000 - €40,000

Catchment Support Fund – Funding stream to provide support to groups/core/operational funding – max award €50,000

River Bunow – Weir Mitigation Project

- Aim:
- To remove obstacle to fish migration on the Bunow River, Roscrea
- To increase available habitat for species such as salmon, trout, lamprey, eels
- Working with Tipperary Co Co to secure funding for feasibility Study





Ongoing Work

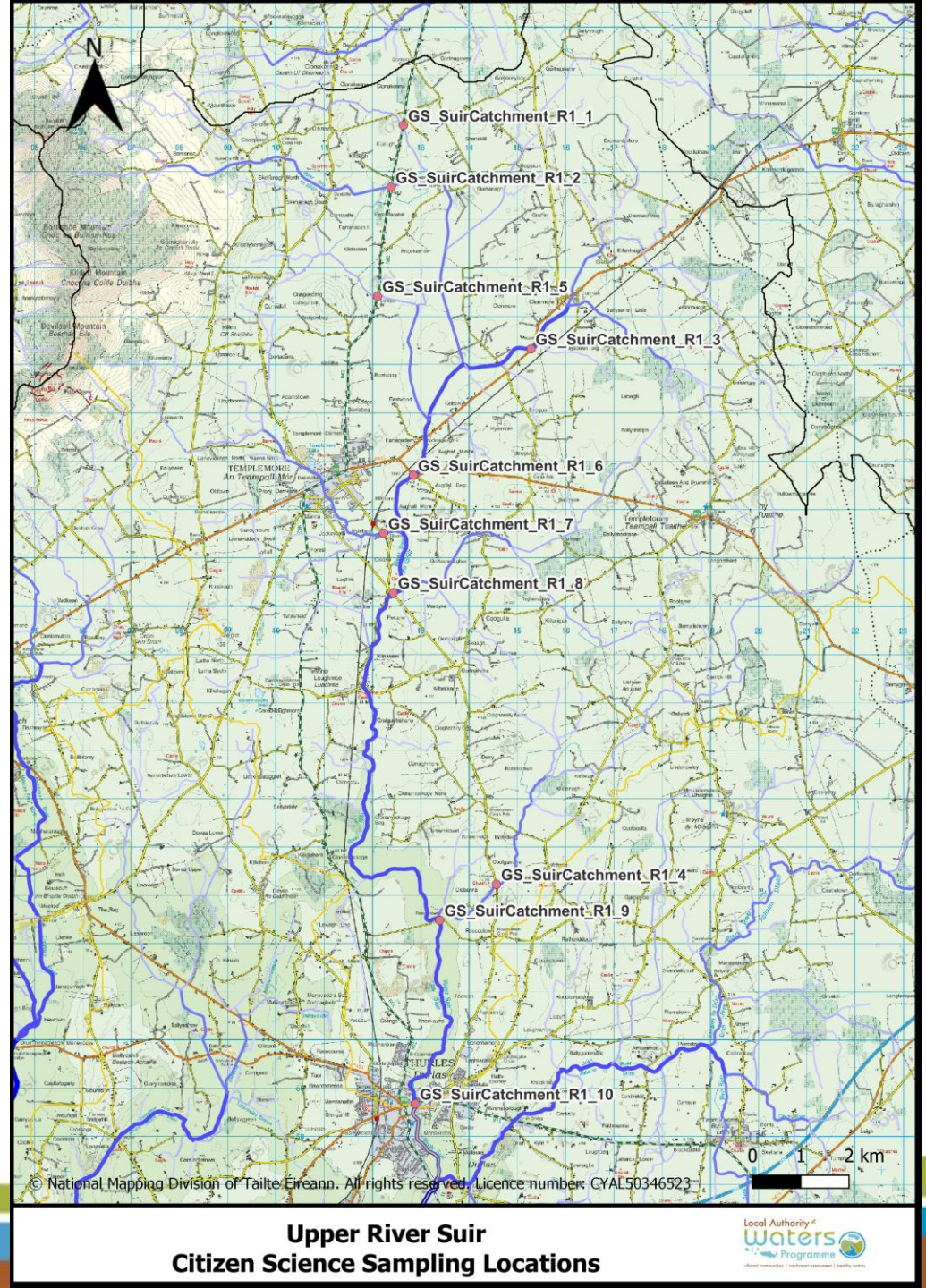
Supporting Cabragh Wetlands
Working with the Lyons Club

Working with Borrisoleigh Community Centre re Rainwater Harvesting for 2026

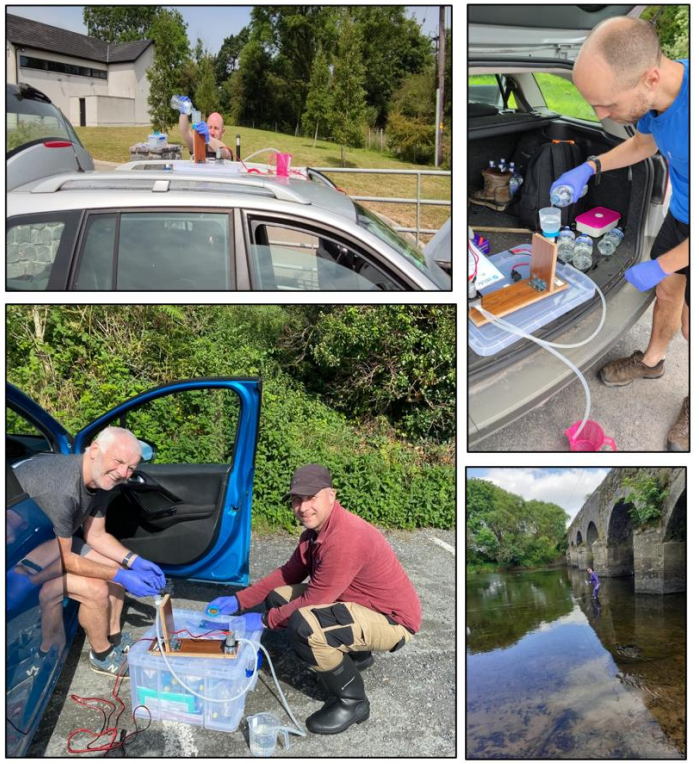
Open to new groups in Thurles MD – talk to us!
mmorrissey@lawaters.ie

Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters

Aging of Water - 10 Sampling Locations, Between Clonakenny and Thurles



A novel approach to mapping the distribution of Sea lamprey, White clawed crayfish and Freshwater Pearl Mussel in a large Irish catchment combining citizen science with eDNA monitoring techniques.



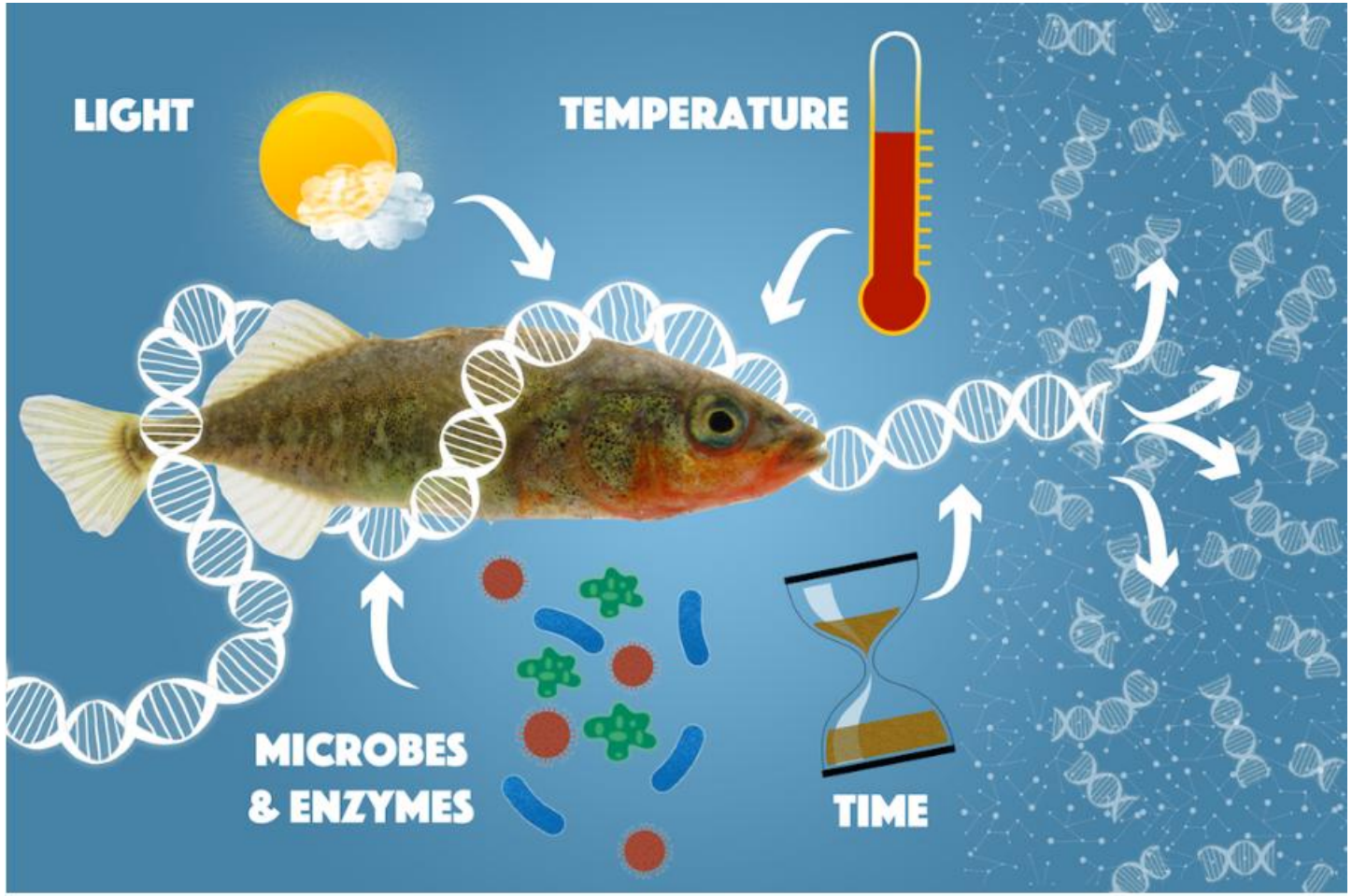
Fran Igoe, Jens Carlsson, Nettan Carlsson, Alan moore, Theresia Guschlbauer, Aoife Egan, Ruth Hennessy, Jim Croke

EIFAAC International Symposium
"Inland Fisheries and Aquaculture - Advances in Technology, Stock Assessment and Citizen Science in an Era of Climate Change"
Killarney, Co. Kerry, Ireland, 20th to 21st June 2022.

Environmental DNA (eDNA)

Environmental DNA (eDNA) is organismal DNA that can be found in the environment. Environmental DNA originates from cellular material shed by organisms (via skin, excrement, etc.) into aquatic or terrestrial environments that can be sampled and monitored using new molecular methods. Such methodology is important for the early detection of invasive species as well as the detection of rare and cryptic species.

Source *U.S. Geological Survey*

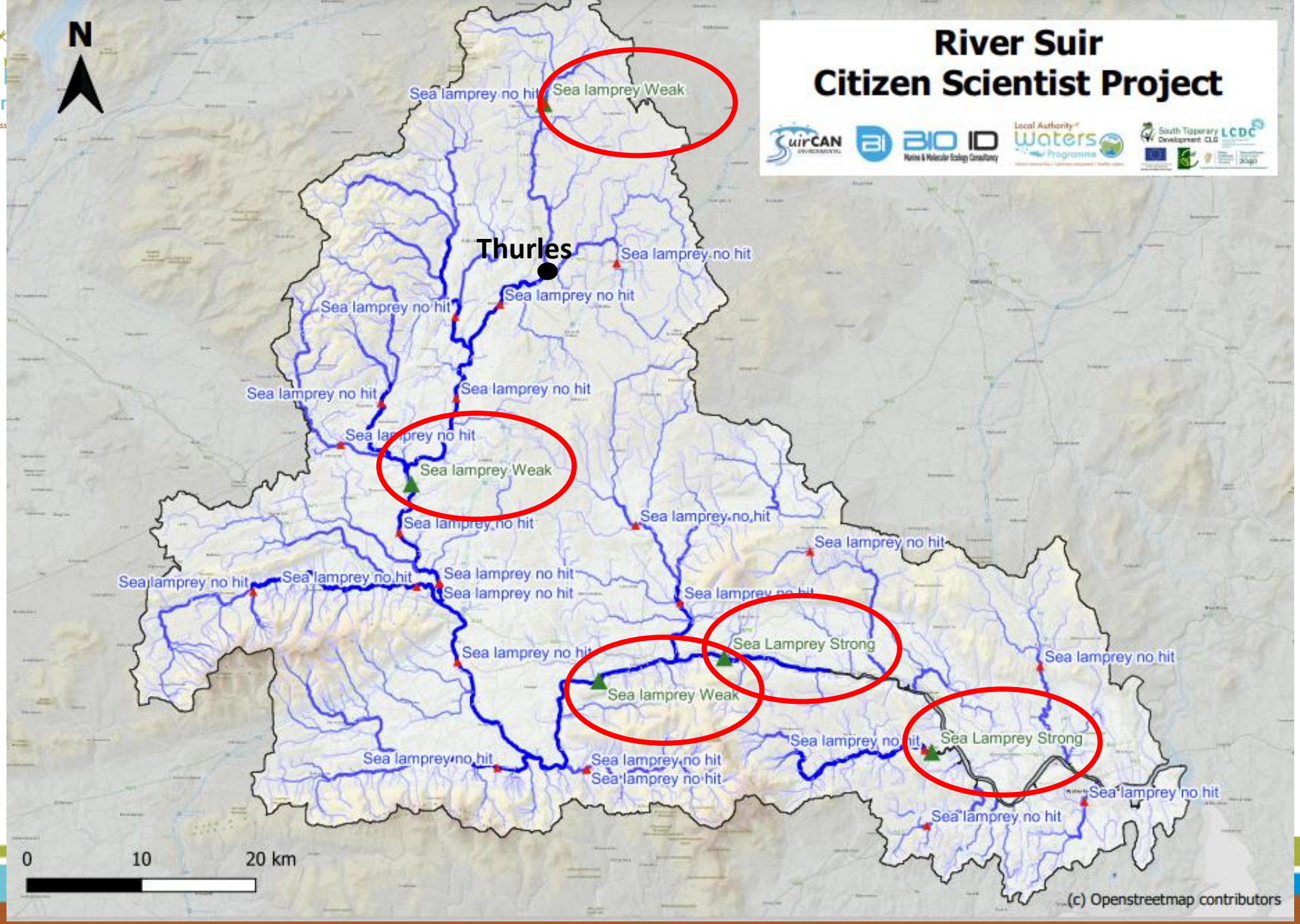


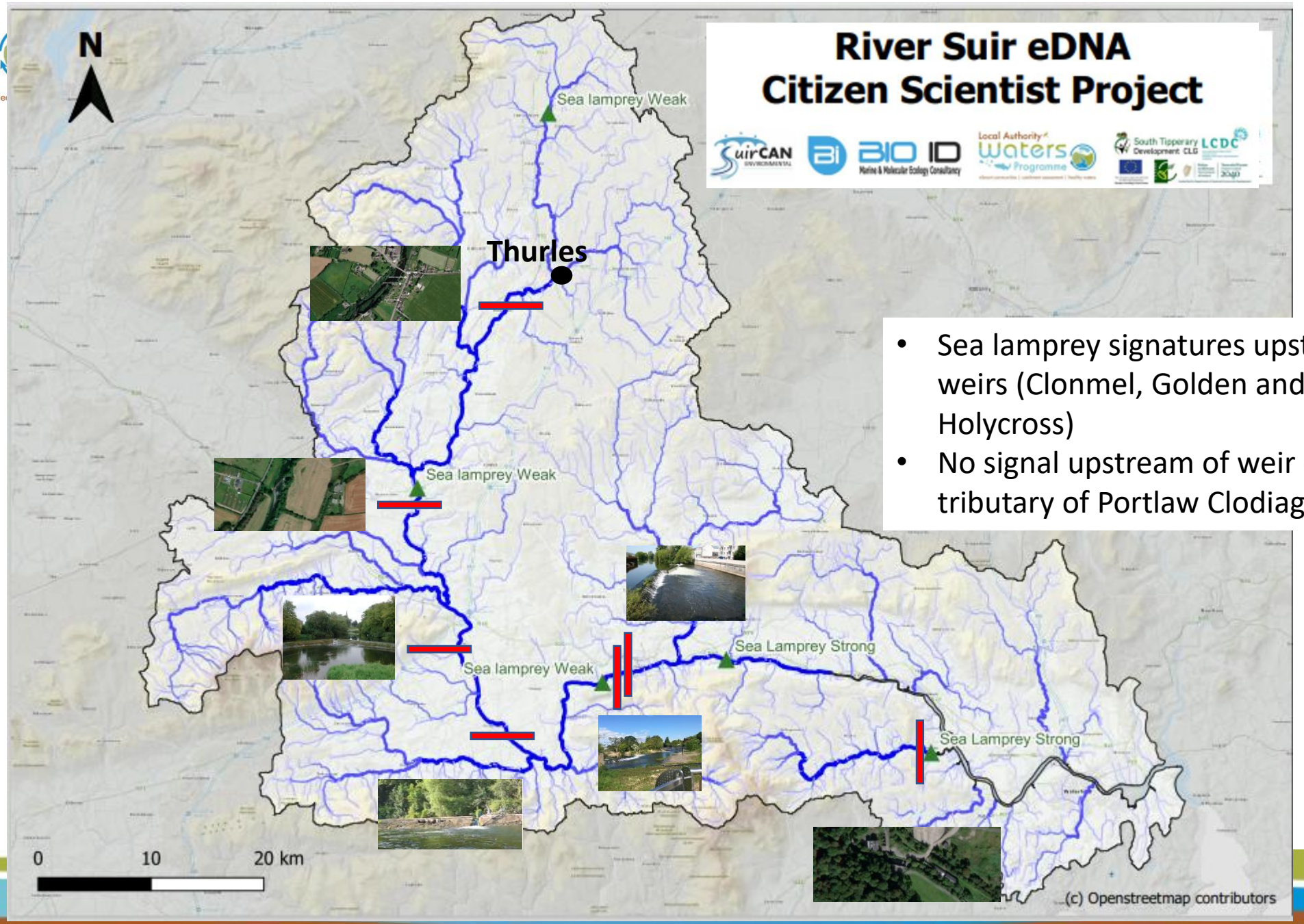
Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters

Res

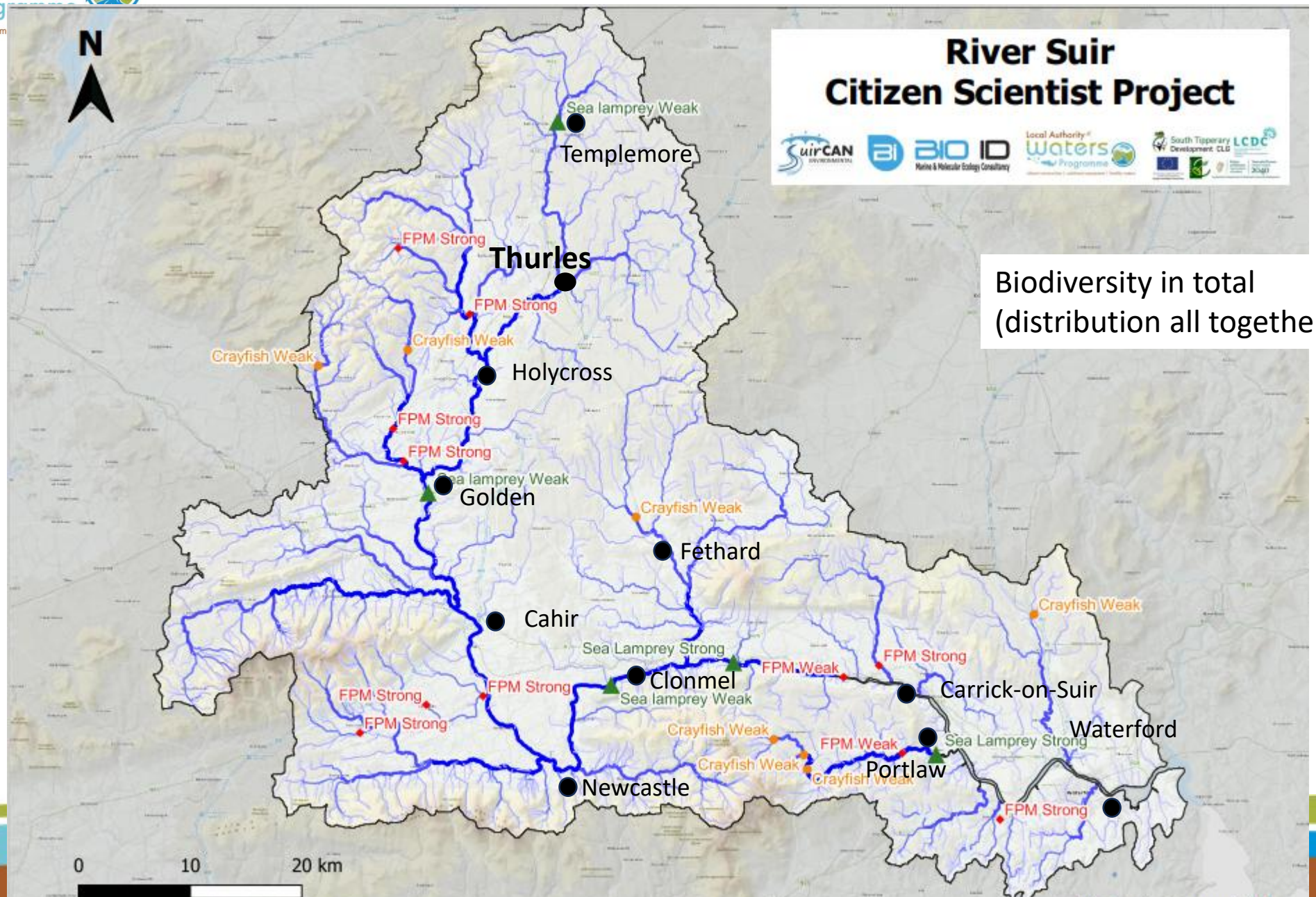
SuirCAN ENVIRONMENTAL

Sea Lamprey


River Suir
Citizen Scientist Project
N
Thurles
Sea lamprey no hit
Sea lamprey Weak
Sea lamprey no hit
Sea lamprey no hit
Sea lamprey no hit
Sea lamprey no hit
Sea lamprey no hit
Sea lamprey Weak
Sea lamprey no hit
Sea lamprey no hit
Sea lamprey no hit
Sea lamprey no hit
Sea lamprey no hit
Sea lamprey no hit
Sea lamprey no hit
Sea lamprey no hit
Sea lamprey no hit
Sea Lamprey Strong
Sea lamprey no hit
Sea lamprey Weak
Sea lamprey no hit
Sea Lamprey Strong
Sea lamprey no hit
Sea lamprey no hit
Sea lamprey no hit
Sea lamprey no hit
Sea lamprey no hit
0
10
20 km
(c) Openstreetmap contributors



- Sea lamprey signatures upstream of weirs (Clonmel, Golden and Holycross)
- No signal upstream of weir on tributary of Portlaw Clodiagh



Biodiversity in total
(distribution all together)

Cabragh Wetlands Thurles: Past, Present, and Future

A VOLUNTARY GROUP'S DEDICATION TO NATURE, EDUCATION AND CULTURE

MICHAEL LONG

What I am going to talk about

- A bit about our background
- What we do now
- Our challenges
- Who we work with
- How we have worked with LAWPRO
- A small bit of detail about one project

Cabragh Wetlands
Discover Nature's Stories

Founding and Historical Development

Cabragh Wetlands
Discover Nature's Stories

Where we came from

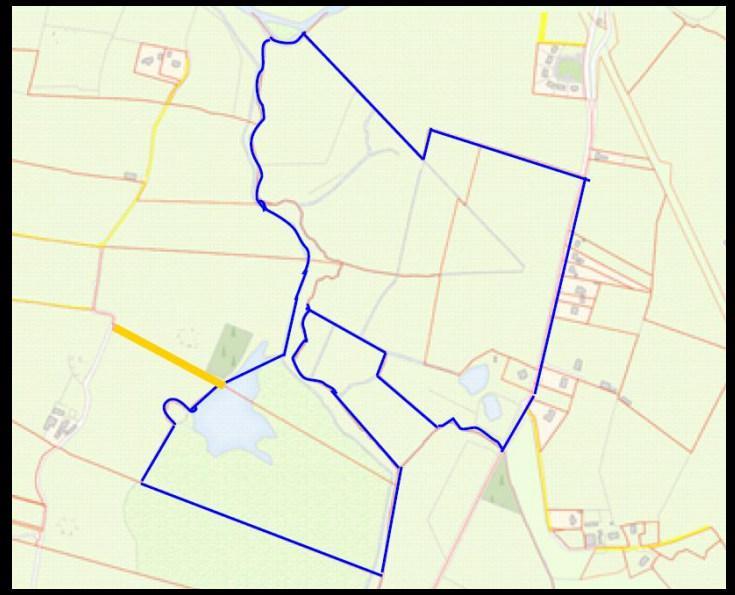
When Thurles Sugar Factory was closing in the late 1980s, there was a threat to an area of wetlands which it owned, and which had ponds which were rich in wildlife.

There was even a suggestion that it could become the town dump!!!

A group of dedicated volunteers led by a real visionary, Tom Grace, came together, persuaded the Sugar Company to sell them the land and established the Cabragh Wetlands Trust

They were driven by a dedication to wildlife and a wish to preserve a rare habitat close to Thurles town

Conservation, Education, Recreation was the initial slogan and still is today.



Our physical assets

Cabragh Wetlands
Discover Nature's Stories

Cabragh Wetlands
Discover Nature's Stories

Our future areas of focus

- Maintaining the wetlands
- Awareness raising, training ad education
- Water quality, earth literacy climate action and biodiversity
- Running ourselves better as a charity and a social enterprise
- Trying to develop a more stable funding base
- Expanding our volunteer base
- Continuing to make our facilities available – 6,500 used them recently over a 12-month period
- Welcoming people to walk in nature
- Considering social inclusion and impact assessment

Welcome people to walk in nature

Cabragh Wetlands
Discover Nature's Stories

Our collaborators and partners

South Tipperary Development CLG

TUS
Ollscoil Teicneolaíochta na Sionainne: Lár Tíre, An tIarthar Láir
Technological University of the Shannon: Midlands Midwest

SETU
Ollscoil Teicneolaíochta an Oirdheiscirt
South East Technological University

Christ's Love compels us

Comhairle Contae Thiobraid Árann
Tipperary County Council

Public Participation Network Tipperary

MIC
Briathar dé mo lóchrann
Mary Immaculate College
Coláiste Mhuire gan Smál

CENTENARY
Home & Garden

NATURA 2000

NTDC
North Tipperary Development Company

Local Authority Waters Programme
vibrant communities | catchment assessment | healthy waters

curious minds
Discover STEM

NPWS
An tSeirbhís Páirceanna Náisiúnta agus Fiadhúlra
National Parks and Wildlife Service

Funded by
An Chomhairle Oidhreachta
The Heritage Council

How LAWPRO has helped us

- Have been supported, guided and encouraged by them from the start
- Were part of the Mid West And Ruairí ÓConchúir was our development advisor – now Margaret and Catherine Seale
- Got, I think eight grants in total since 2018
  - 2018 - Contribution towards Cosmic Walk
  - 2018 - Contribution towards information booklet
  - 2019 - Signage
  - 2021 - Land Purchase
  - 2022 - Habitat Management Plan
  - 2024 - Habitat Improvement Works
  - 2024 - Organisational Development
  - 2025 – Organisational Development and the Lisnagonoge Project

The Lisnagonogue Project

- The Lisnagonoge stream is a small watercourse that flows by Cabragh Wetlands into the Suir
- This is a project that started last year and we hope will continue for next year at least.
- Based on the idea that many, many small streams make up the big rivers
- If the water quality in the little streams is good, it will help the quality in the river
- There is a lot of talk about communities being involved in water quality but very hard for a community to take on a large waterbody
- But what if it worked on its own streams?

The idea

- Do a background report
- Measure the quality of the water in the stream a few times during the year
- Share that information with every household in the community
- Depending on the outcome ask them to reflect on their role in providing good water quality
- Invite them to the wetland for tea and a chat if they were interested
- Project got slightly interrupted due to a resignation but the project is still ongoing

And…

- What the project is
  - A gathering of more local information
  - A sharing of that information with the community
  - A request to every member of the community to reflect on how they might help
- What the project is not
  - A pointing of fingers or assigning of blame
  - An investigation of causes and seeking of evidence
- We have no idea if this might work but we felt it was worth a shot
- LAWPRO agreed and helped us do it.
- We will be publishing a report in due course.

Cabragh Wetlands
Discover Nature's Stories

Thank You