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Update on LAWPRO & EPA Water Quality Report 2019

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Kilkenny County Council
18th January, 2021

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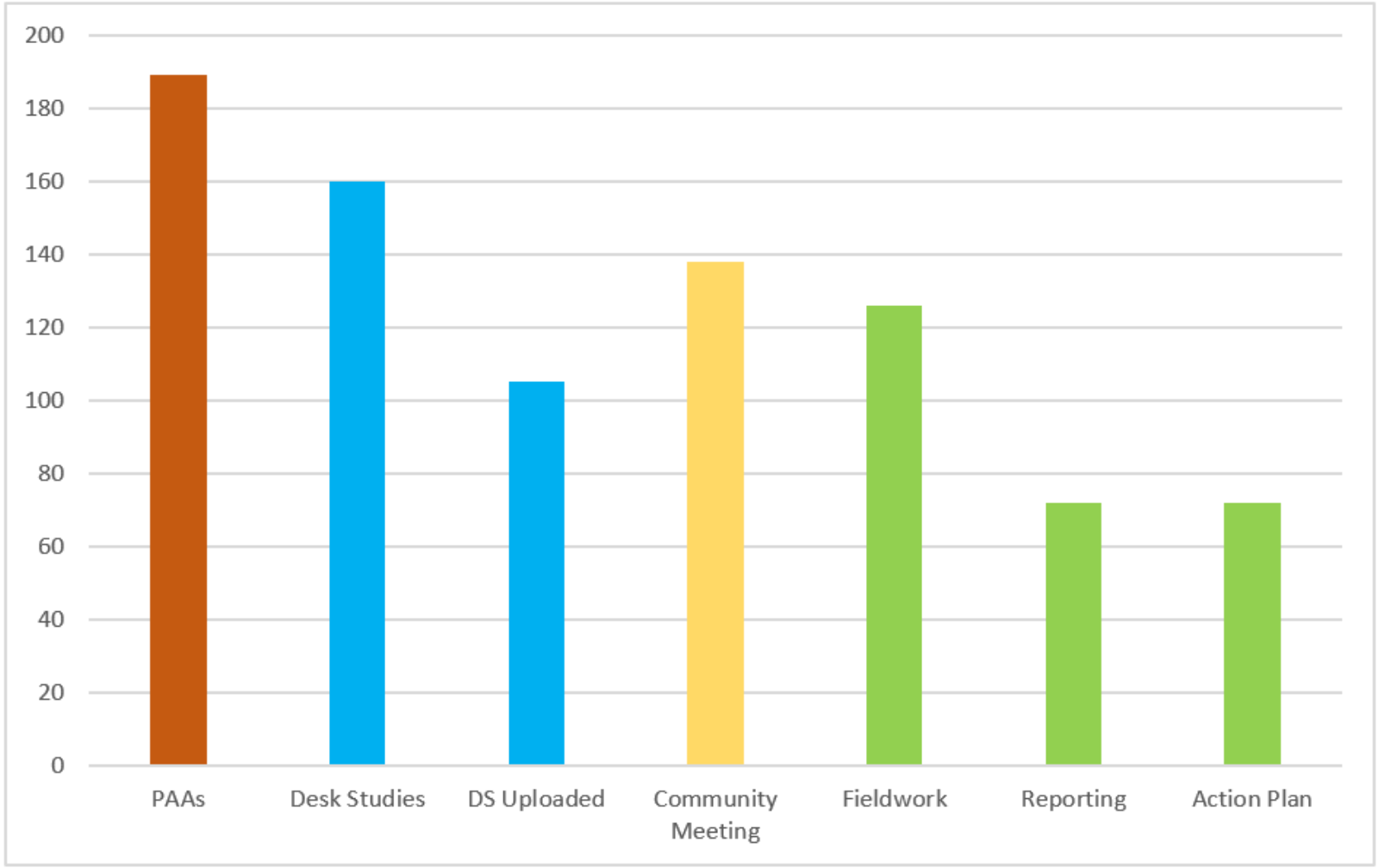
National Progress to-date



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Progress in Kilkenny

	2020												2021											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Dinin (South, Main and Muckalee)																								
Duiske & Powerstown Stream																								
Nuenna																								
Breagagh																								
Brownstown (Pococke)																								
Erkina*																								
Lingaun*																								

* only small area in Kilkenny

- Desk Study
- Fieldwork
- Reporting and Referrals
- Delayed Fieldwork

Kilkenny River Summaries

- Breagagh
  - Community Meeting held 24 Nov 2020
  - Fieldwork to commence in early 2021
- Lingaun
  - To commence 2021
- Pococke
  - Community Meeting in 2021

Dinin Summary

- LAWPRO have carried out assessments in 3 sections of the Dinin and have found that water quality in the river known as Dinin (South) has returned to good quality and no further actions are being recommended here.
- However, in the main channel of the Dinin, downstream of Dysart bridge, water quality is significantly impacted due to excess nutrients, in particular **phosphorus**.
  - The sources are upstream of the current study area, and LAWPRO have proposed to extend this area for action in RBMP 2022-2027 to include all sections of the river.
- The Muckalee (Douglas river) was also assessed, this is **Kilkenny's only high status river**.
  - Unfortunately, it is currently not reaching its high status potential and there are concerns about the risk of **sediment** loss to the river from forestry which is planted close to the river channel.
- ASSAP have started engagements with farmers in this catchment highlighting the actions that farmers can implement to protect water quality on their lands.

Duiske & Powerstown Stream Summary

- LAWPRO's catchment scientists have determined that water quality in the Duiske river upstream of Graiguenamanagh has deteriorated due to high levels of the nutrient **nitrogen**.
  - We are working to identify the areas within the catchment that are contributing this nitrogen; we know that excess nitrogen applied as a fertiliser is lost to groundwater from agricultural areas in particular from well drained soils.
- In the Powerstown section of this PAA, elevated levels of **phosphorus** and **ammonia** were detected and linked to both agricultural and domestic wastewater sources.
  - The householders concerned will be notified that they may be eligible for a grant to upgrade faulty septic tanks.
- ASSAP's agricultural advisors have started engagements with farmers in this catchment and are awaiting detailed findings from LAWPRO to identify where farmers should focus improvements and actions on their lands.

Nuenna Summary

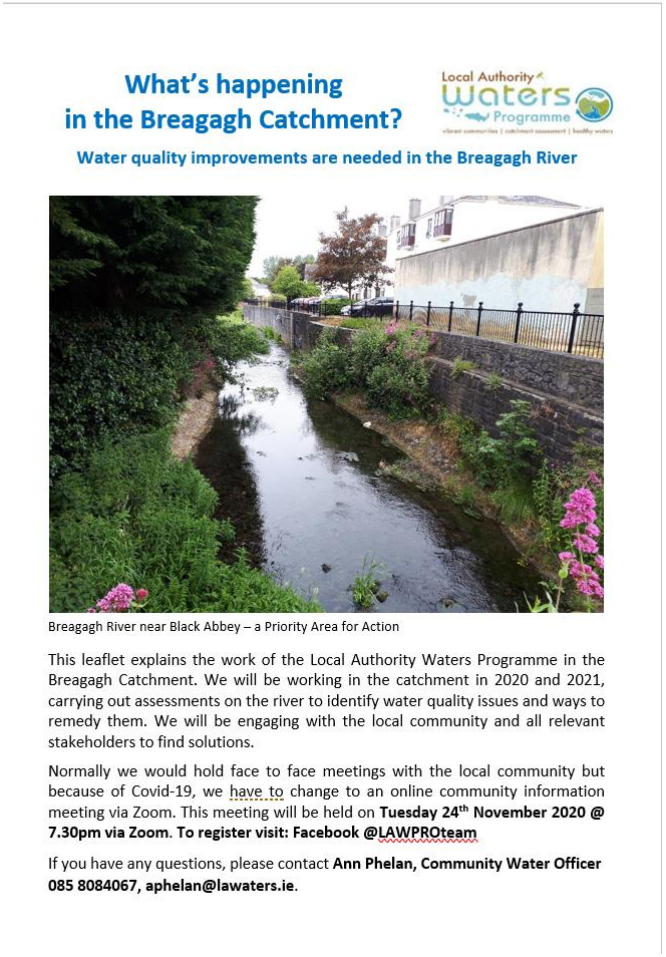
- LAWRPO's catchment scientists are currently completing our assessments of the Nuenna PAA.
  - Water quality has deteriorated in the Nuenna largely due to high levels of nutrients in particular **nitrogen**, but also **phosphorus**.
  - We are also examining the wastewater treatment plant in Freshford as a source for phosphorus, but we know it is not the only source.
  - We have found that agriculture is the main source of these nutrients and much of the nutrient is entering the river through groundwater springs.
  - These nutrients are lost from the land and enter groundwater when excess fertiliser applied to agricultural lands, in particular the lands on the hills surrounding the river where soils are shallow and well drained.
  - LAWPRO have identified the areas within the catchment that are contributing these nutrients and ASSAP's agricultural advisors are continuing to work with farmers in this catchment to identify where farmers should focus improvements and actions on their lands.

Erkina Summary

- The Erkina is a large PAA and LAWPRO's catchment scientists have commenced fieldwork in the sections of the river upstream of Rathdowney.
  - Water quality is deteriorated primarily due to high concentrations of the nutrients **phosphorus** and **nitrogen**.
  - Work is continuing to identify the areas and activities that are the sources of these nutrients.
  - ASSAP's agricultural advisors have started engagements with farmers in this catchment and are awaiting detailed findings from LAWPRO to identify where farmers should focus improvements and actions on their lands.

Community Meetings in Kilkenny PAAs

- Dinin & Muckalee – 8th Nov 2018
- Duiske & Powerstown Stream – 25th Feb 2019
- Nuenna – 28th Feb 2019
- Breagagh – 24th Nov 2020
- Brownstown (Pococke) – 2021 TBC
- Erkina – 27th Nov 2019
- Lingaun – 2021 TBC



What's happening in the Breagagh Catchment?

Water quality improvements are needed in the Breagagh River

Breagagh River near Black Abbey – a Priority Area for Action

This leaflet explains the work of the Local Authority Waters Programme in the Breagagh Catchment. We will be working in the catchment in 2020 and 2021, carrying out assessments on the river to identify water quality issues and ways to remedy them. We will be engaging with the local community and all relevant stakeholders to find solutions.

Normally we would hold face to face meetings with the local community but because of Covid-19, we have to change to an online community information meeting via Zoom. This meeting will be held on **Tuesday 24th November 2020 @ 7.30pm via Zoom. To register visit: Facebook @LAWPROteam**

If you have any questions, please contact **Ann Phelan, Community Water Officer 085 8084067, aphelan@lawaters.ie**.

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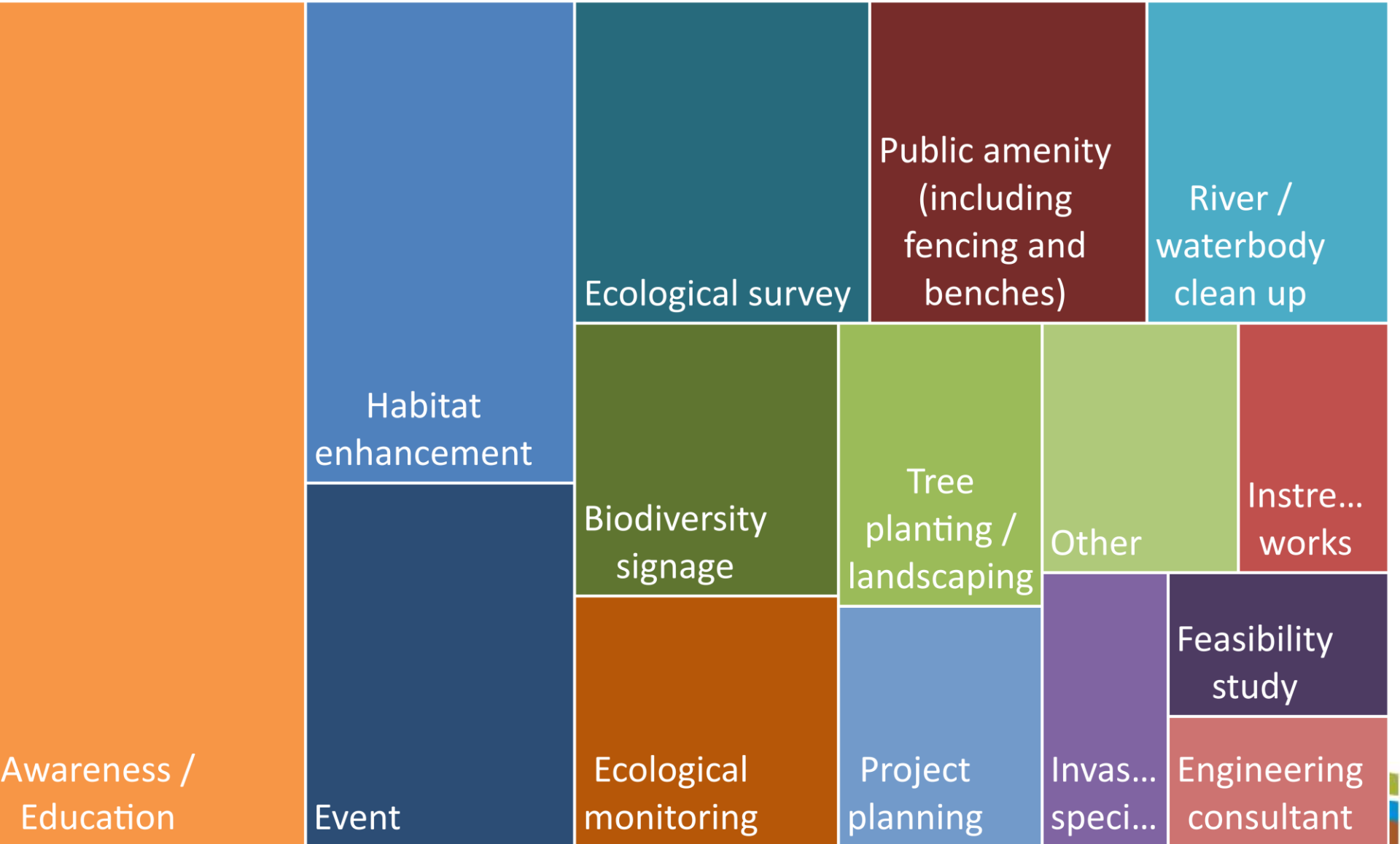
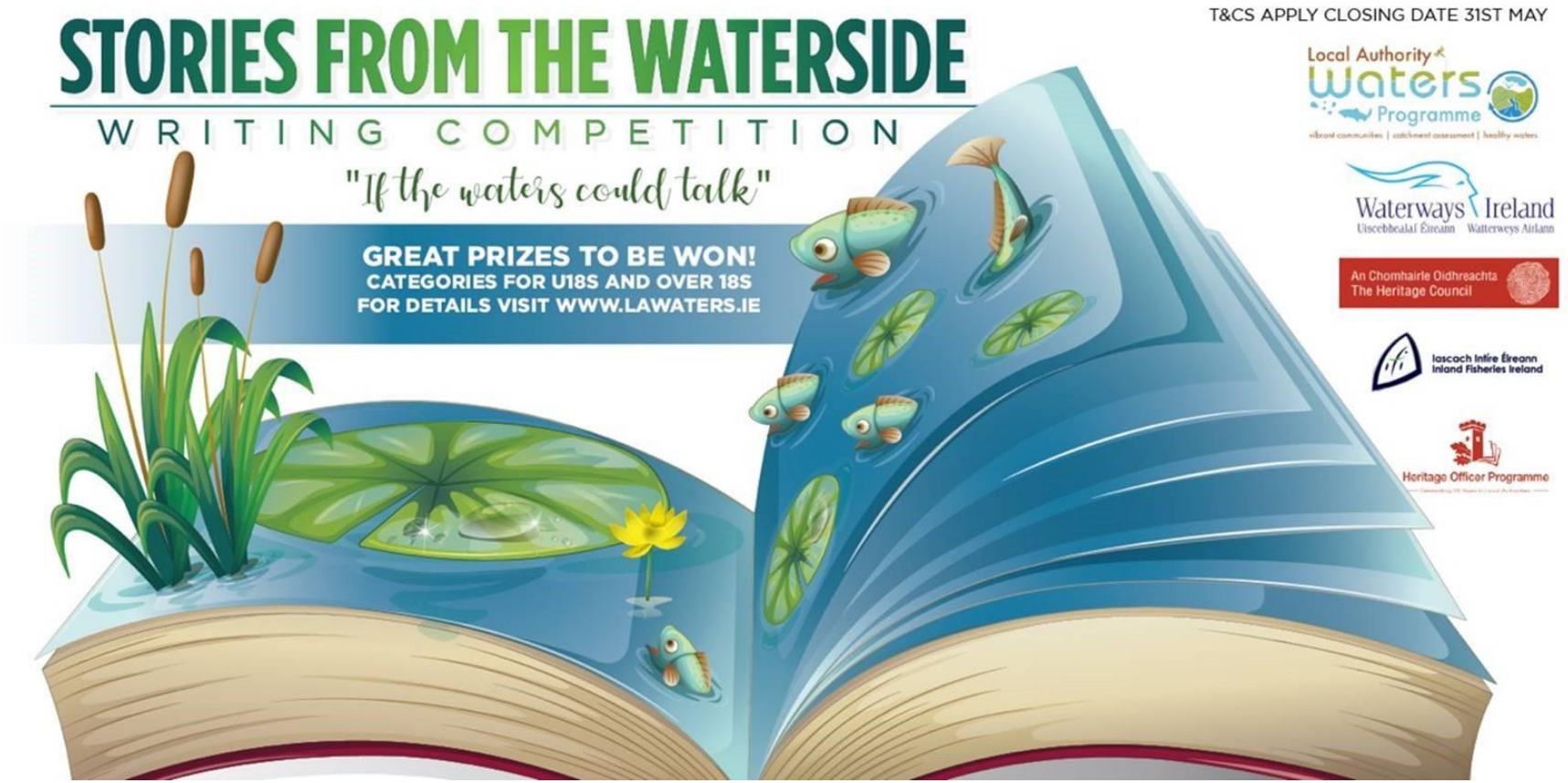
Community Actions

Community Water Development Fund 2020



Scéalta Ó Thaobh An Uisce



Community Initiatives

- River Clean Ups Barrow and Nore
- Working with Inistioge Tidy Towns/Windgap TT/KKB Tidy towns
- Working closely with PPN to get information out to communities
- LAWPRO supporting Outdoor Activity Hub Graig, outdoor education facility (bio-diversity)
- KCLR Documentary Series Sept/Oct 2020 on “The River Nore, Fit for a King” looking at the challenges for Salmon Species in the River Nore.
- Support for the Nore Vision CS programme

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- Water Heritage day Events Min Noonan launching Stories from the Waterside.

- Nore Vision Project – flag ship project on holistic catchment management. Supported by Kilkenny Leader, Laois, Tipperary and LAWPRO

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- The Indicators Report provides an update on the quality of water in Ireland's rivers, lakes, transitional and coastal waters and groundwater using information collected in 2019.

- The EPA undertakes a full assessment of water quality in Ireland every three years (the latest in 2018) and reports on the indicators of water quality in the intervening years.

- These indicators provide an update on the biological quality of our rivers and lakes and the nutrient concentrations in all the water categories

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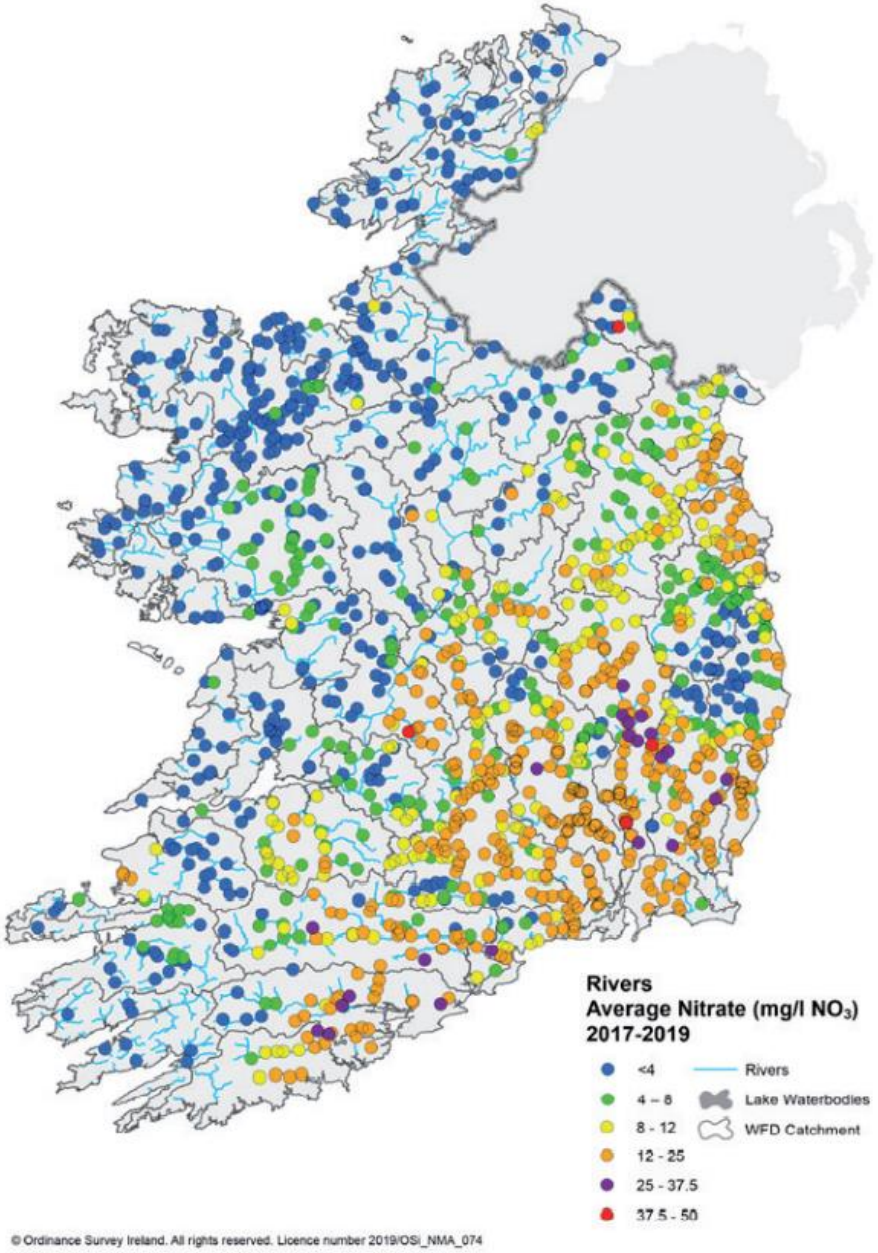
Nutrients (Nitrate and Phosphate) are too high with trends going in the wrong direction.

High Nitrate levels in the south and southeast are damaging our Estuaries.

Elevated nitrate concentrations are contributing to eutrophication in our freshwaters and estuaries and causing difficulties with drinking water standards in some areas.



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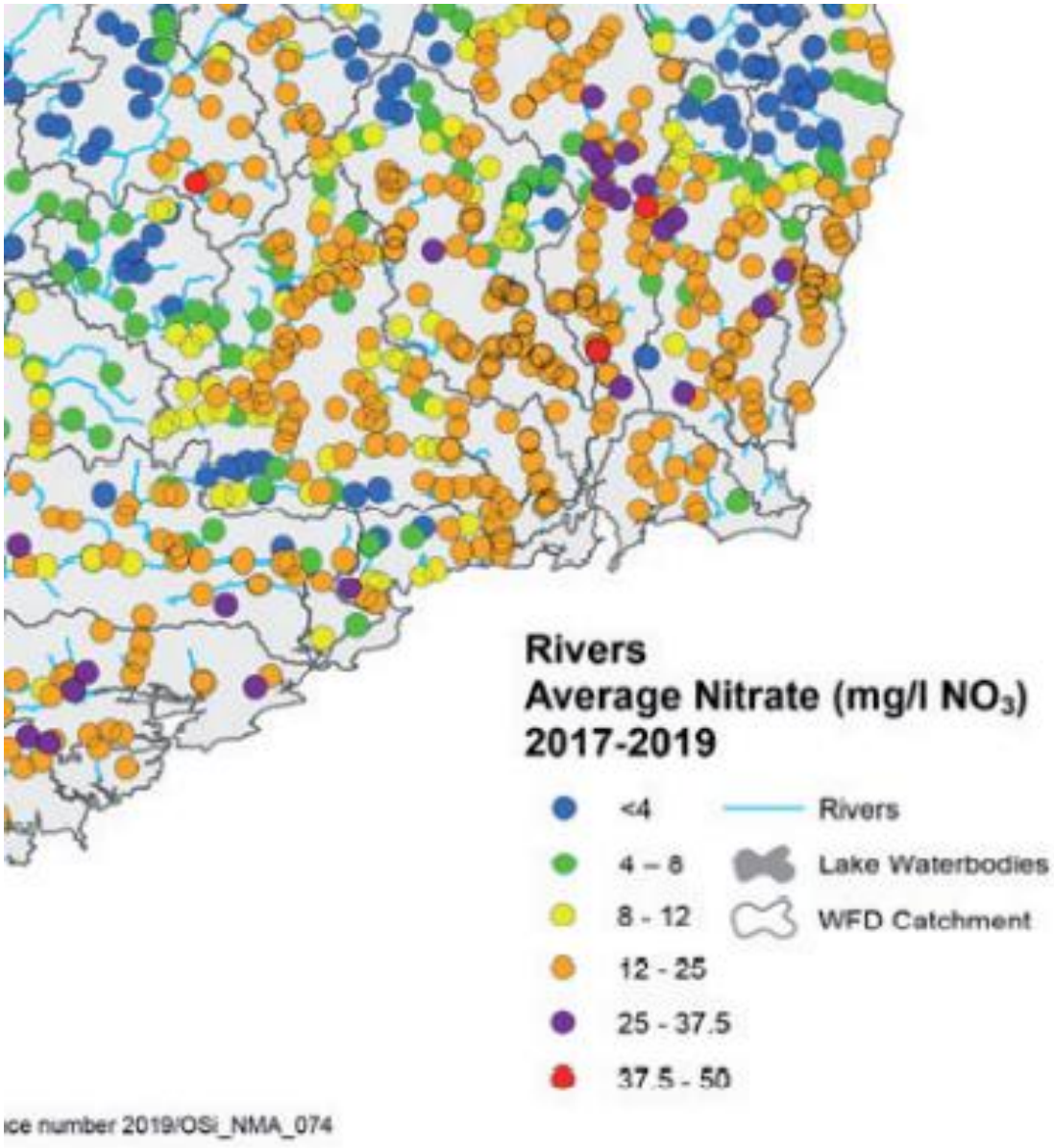

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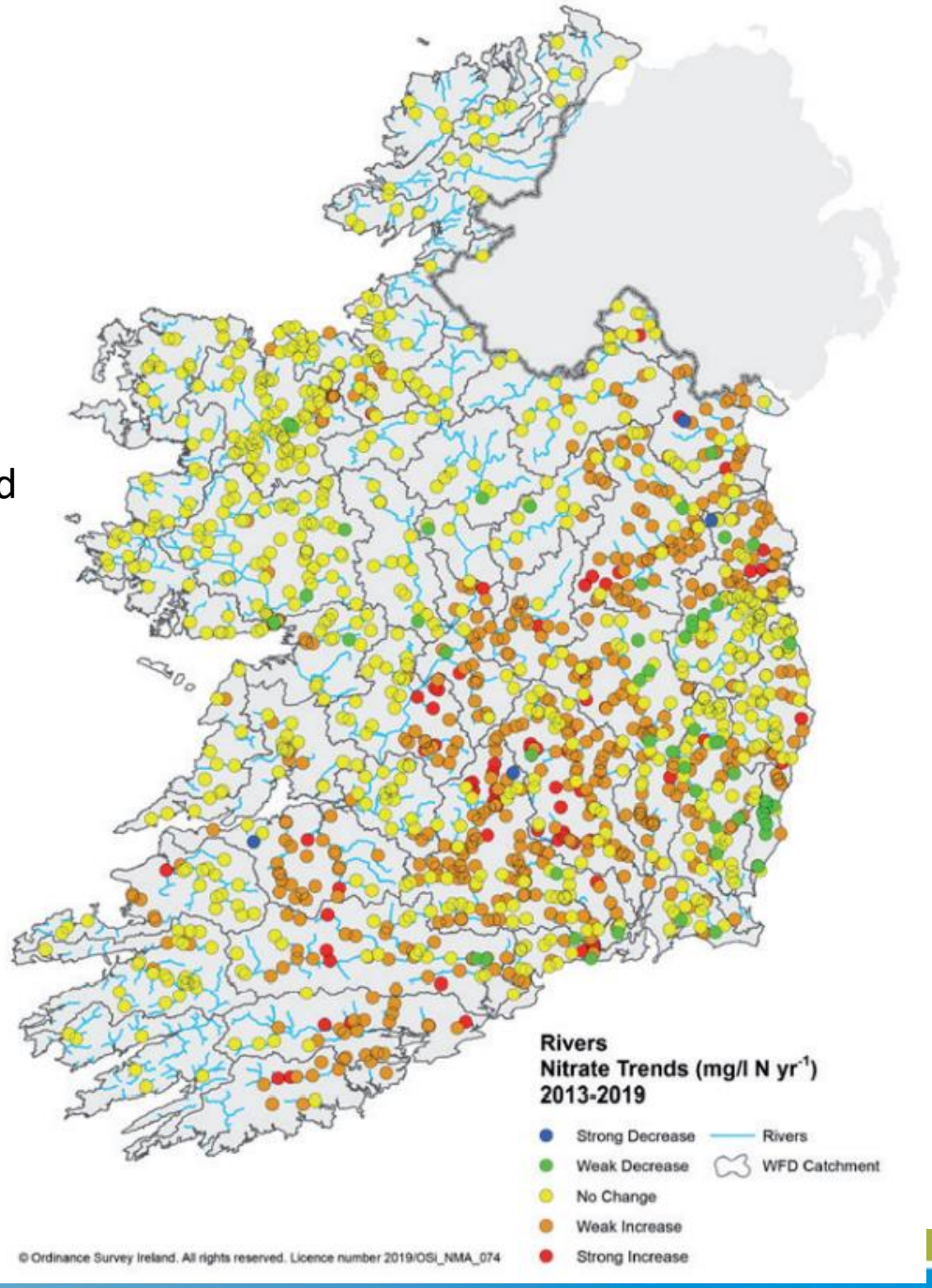
Nitrate levels are increasing in almost half our rivers and groundwaters.
Before 2015 only 1.4% of sites had increasing nitrate levels.



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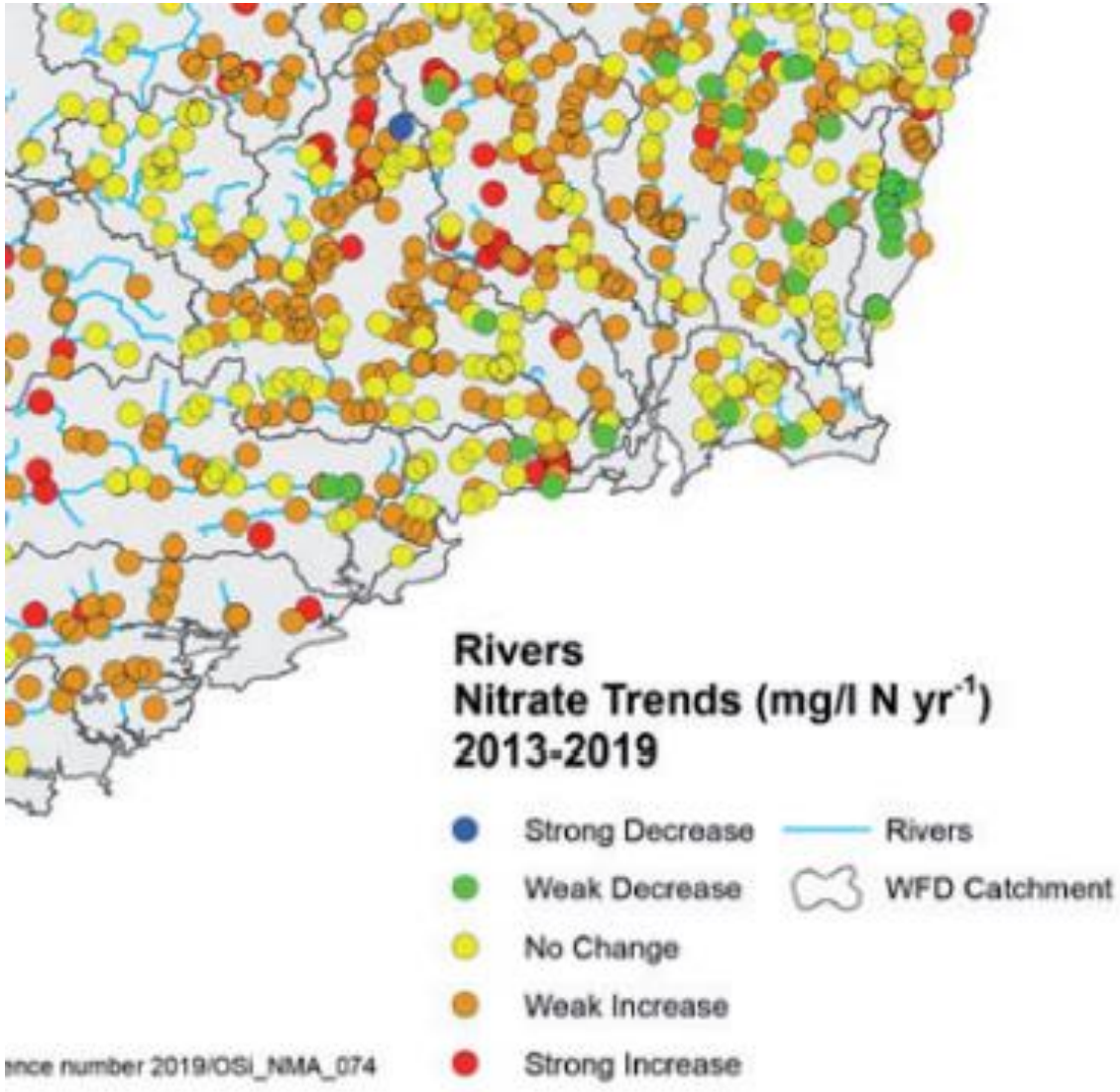

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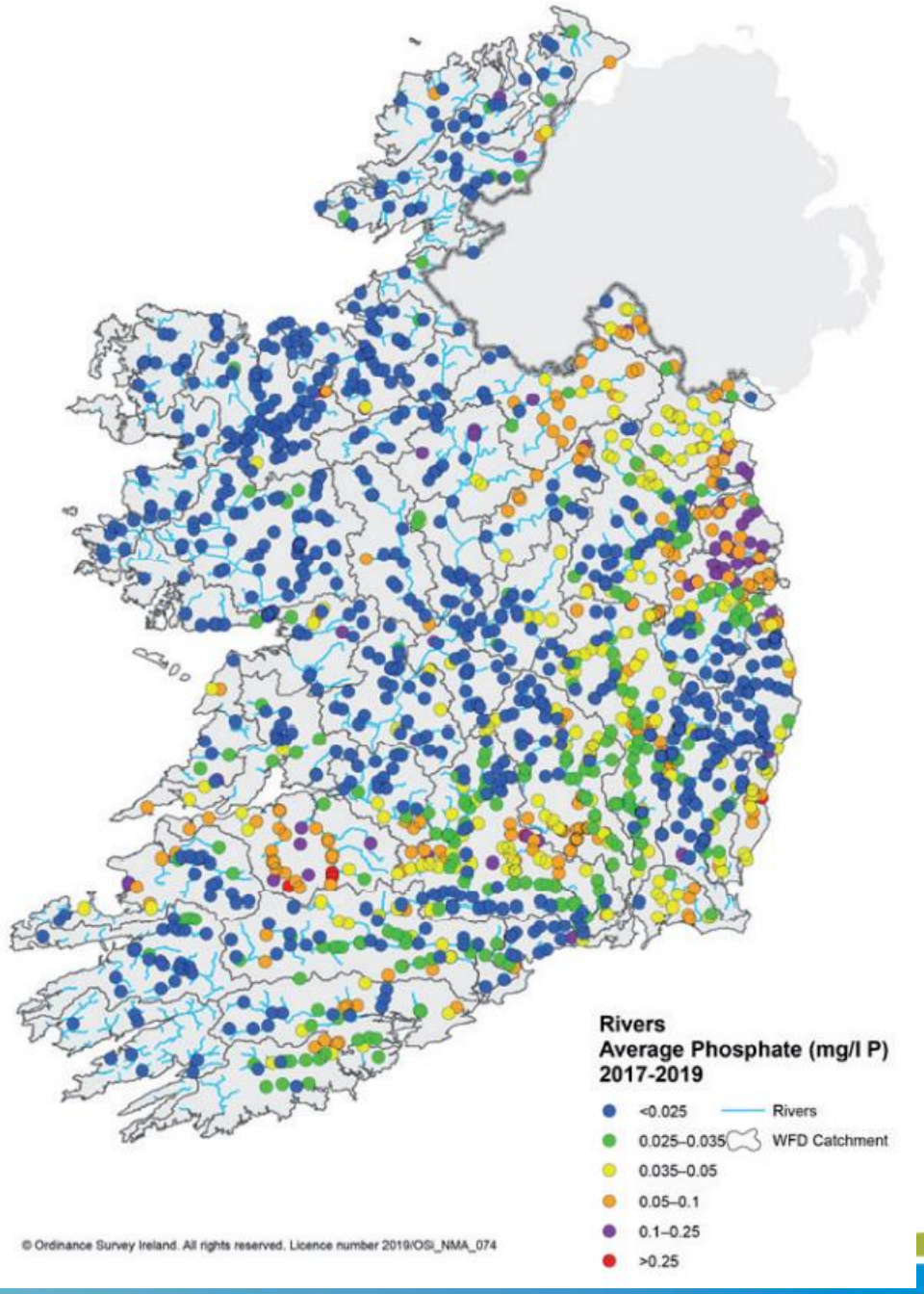

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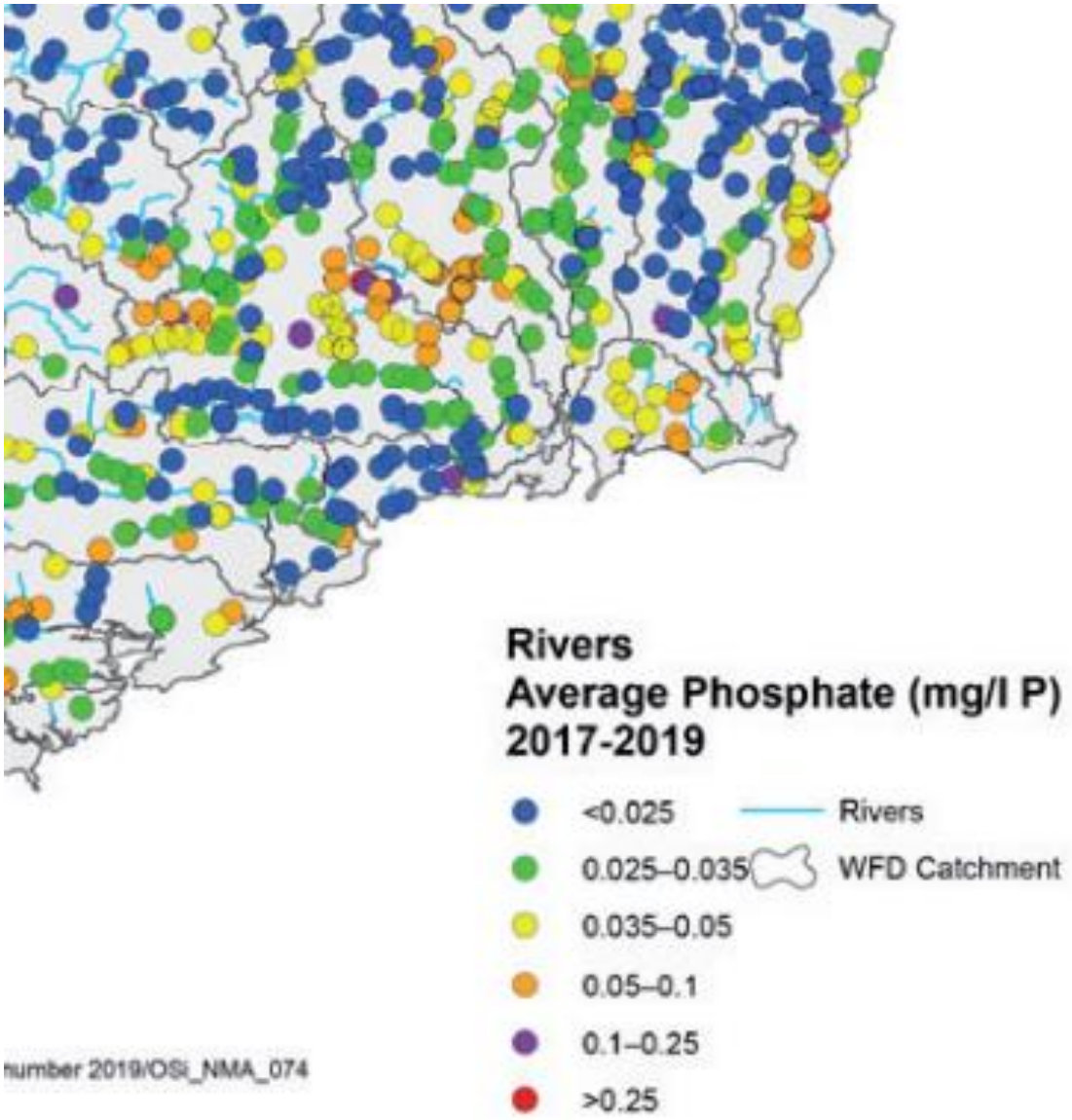

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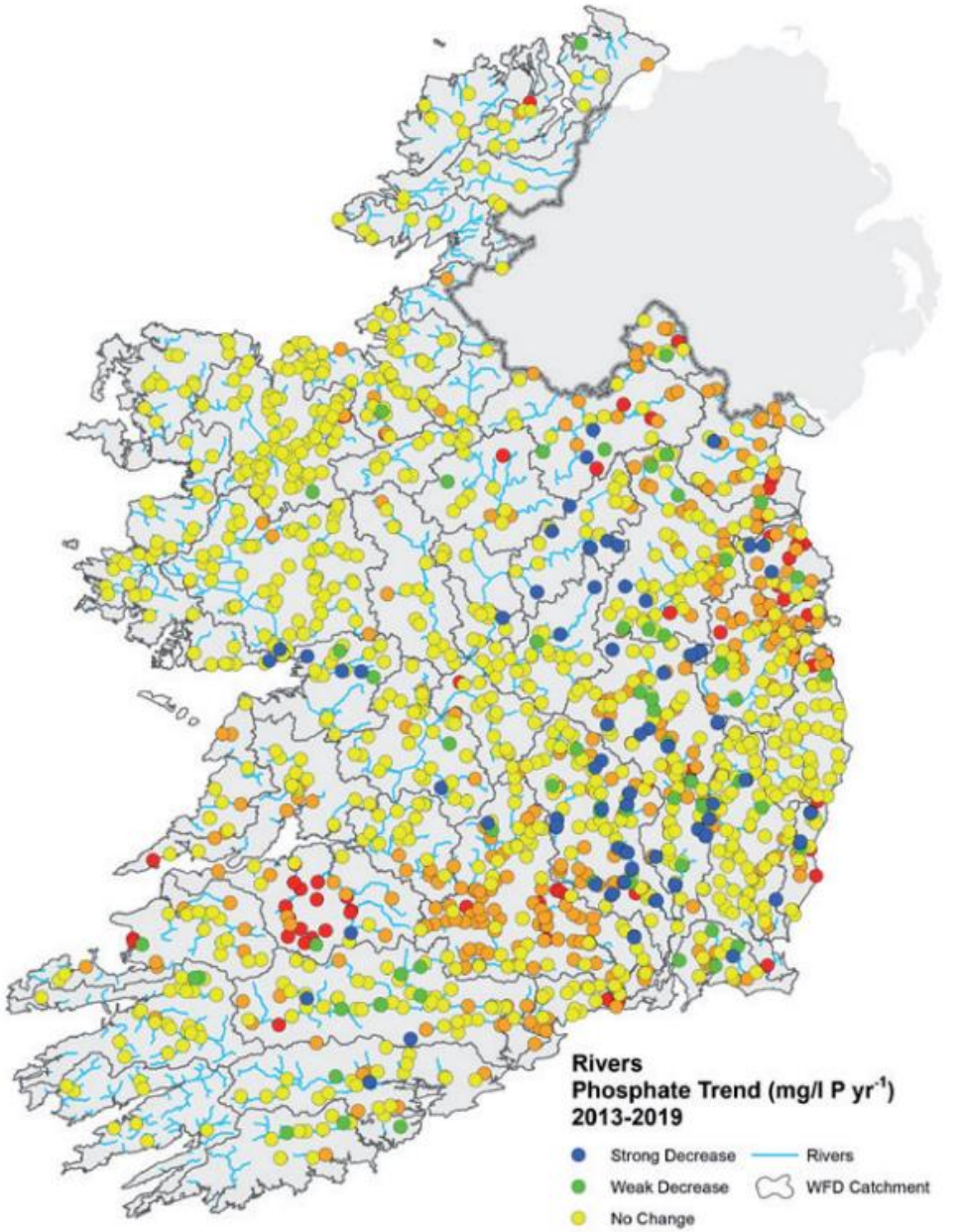

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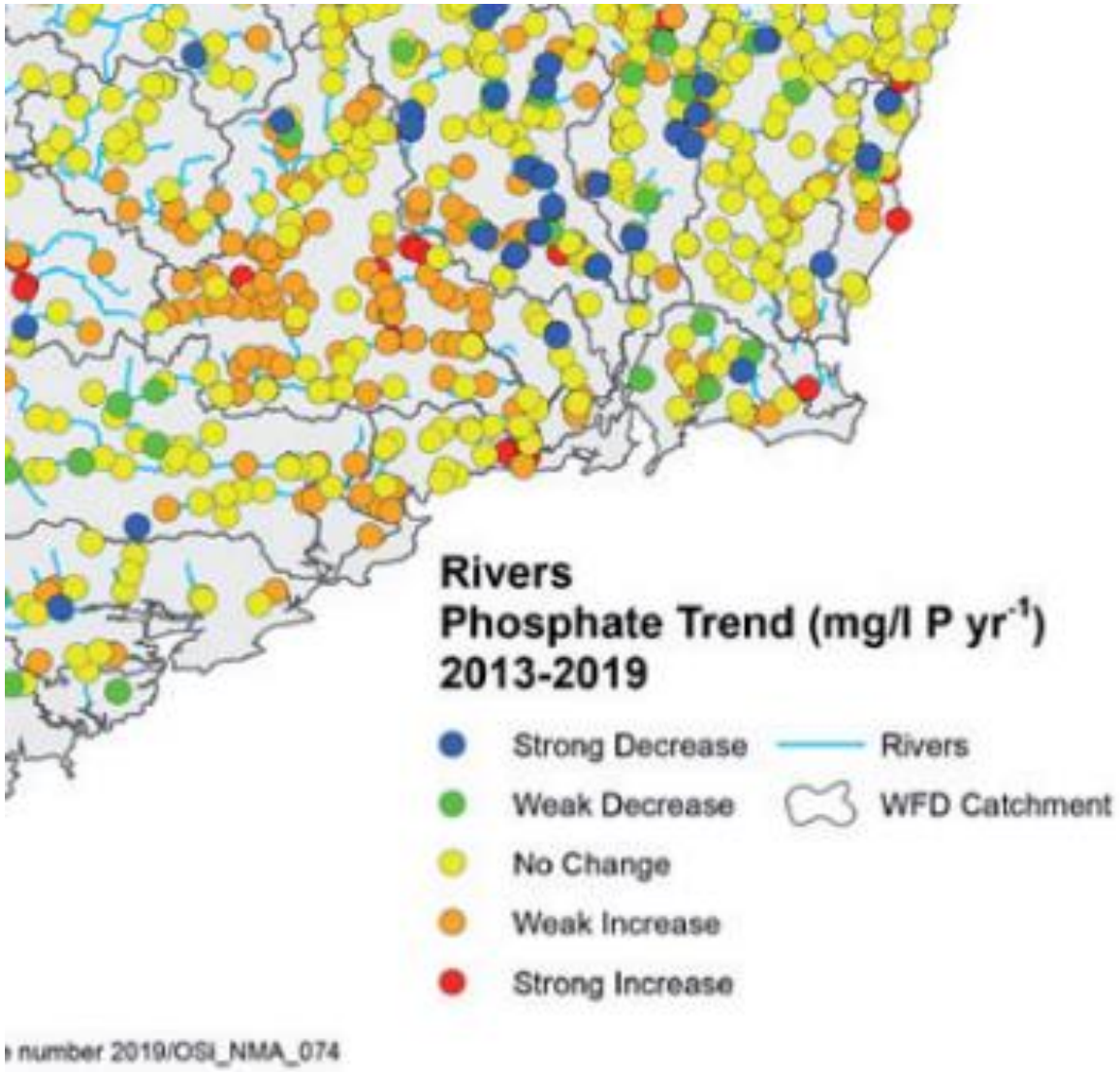

Biological Quality

- Our rivers and lakes are not as biologically healthy as they should be.
  - Just over half of them are in high or good biological quality.
- The rivers surveyed in 2019 have, however, shown more improvements than declines overall, which is welcome.
- We are also seeing improvements in PAAs which are the areas being targeted for restoration under the River Basin Management Plan.
  - This builds on the improvements reported in these areas previously

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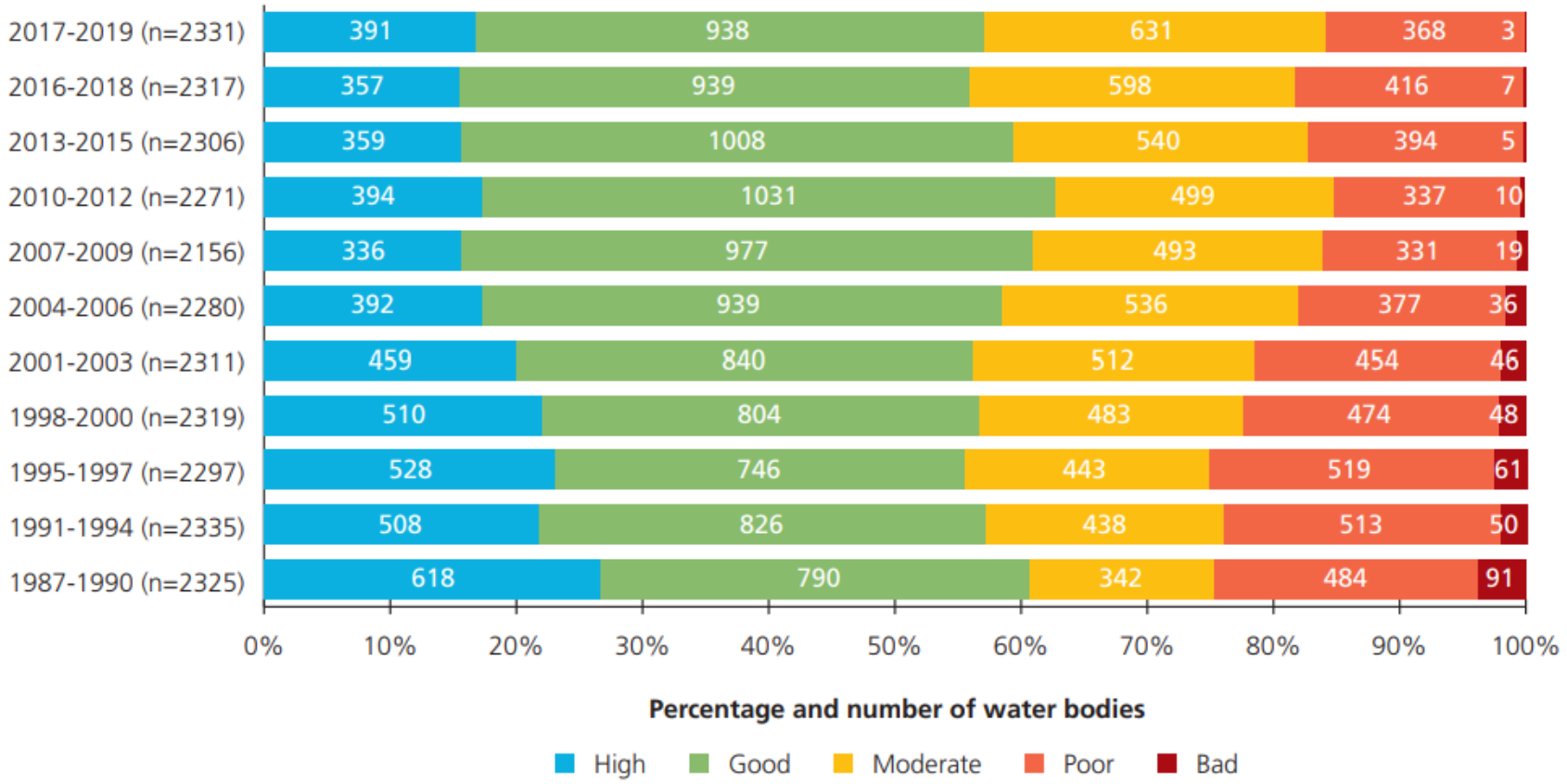
River WBs



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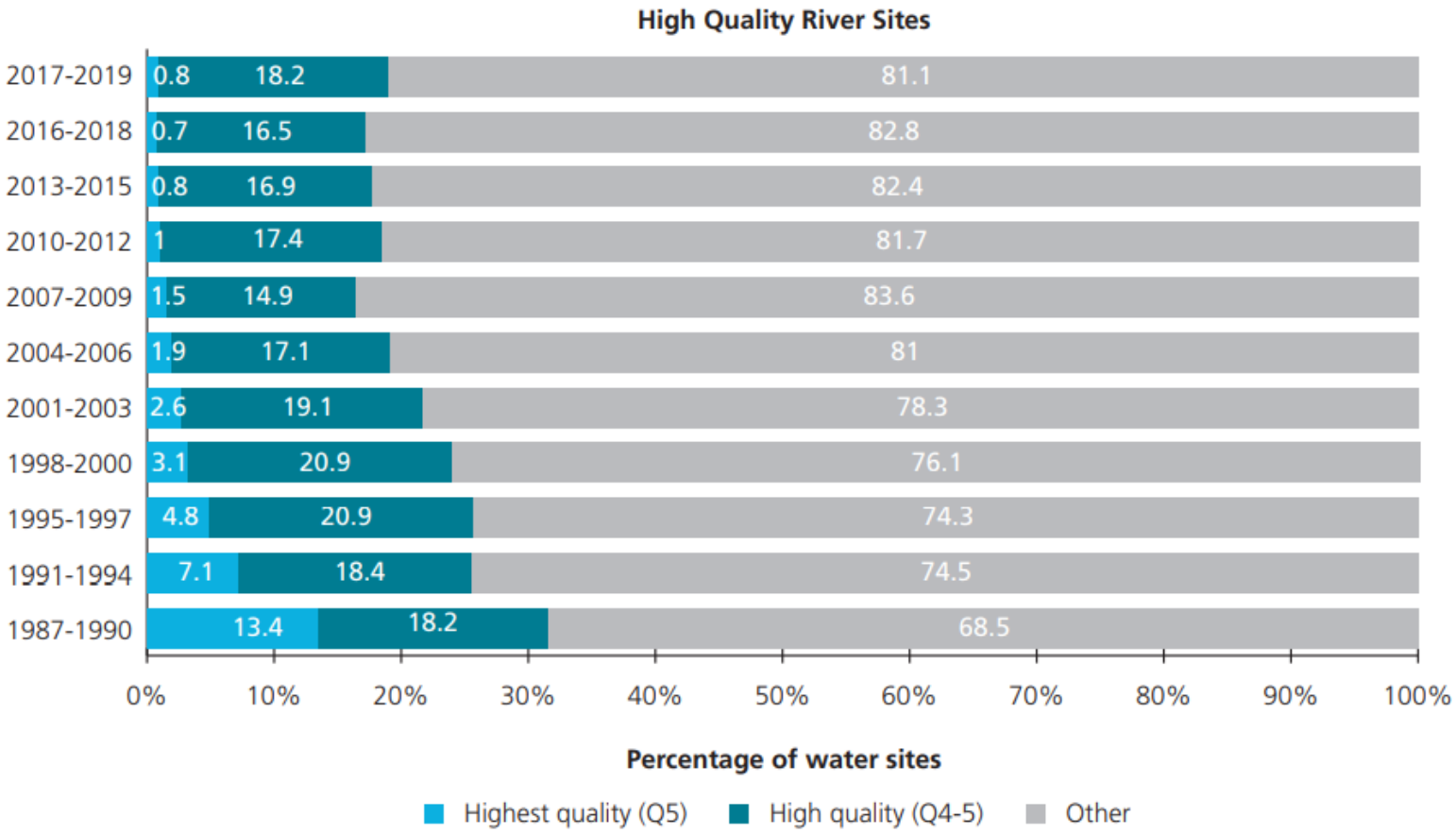
High Quality Sites



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Focused Action

- The most prevalent human activities impacting on our water quality with excess nutrients are agriculture and discharges of urban waste water.

- Agriculture impacts on over half (53%) of the 1460 water bodies at risk of not meeting their WFD environmental objectives and urban waste water impacts on 22%.

- Physical habitat changes such as dredging and barriers, urban run-off, and activities such as forestry, and peat extraction and drainage also put pressure on our water environment.

- Analysis by the EPA shows that intensive agricultural practices are the predominant source of excess nitrogen in our waters, particularly in the south and southeast of the country

- The forthcoming review of the Nitrates Action Plan, the new Common Agricultural Policy Strategic Plan and the full implementation of the EU Farm to Fork Strategy and Biodiversity Strategy offer significant opportunities to achieve improvements in water quality while also delivering ***multiple benefits*** for the environment including for climate, air quality and biodiversity

Main Findings

Rivers

- Nearly half (**47%**) of river sites have unsatisfactory nitrate concentrations.
  - **44%** of sites are showing an increasing nitrate trend for the period 2013-2019.
- Over a third (**34%**) of sites have unsatisfactory phosphate concentrations.
  - One quarter (**26%**) of sites are showing an increasing phosphate trend for the period 2013-2019.
- **57%** (1,329) of river water bodies are in high or good biological quality with the remaining **43%** (1,002) in moderate or worse quality.
  - The rivers surveyed in 2019 (856 out of 2331 water bodies) have shown a net improvement in biological quality in **114** water bodies.

Main Findings

Estuaries and Coastal Waters

- Over a fifth (**22%**) of estuarine and coastal water bodies have unsatisfactory dissolved inorganic nitrogen (DIN) concentrations.
  - The highest DIN concentrations are in the south and southeast of the country.
- Nearly all (**96%**) estuaries and coastal waters have satisfactory phosphate concentrations and these are generally stable.
- Loads of total nitrogen and total phosphorus to the marine environment from our rivers have increased by **24%** (13,559 tonnes) and **31%** (338 tonnes) respectively since 2012-2014.

Main Findings

Groundwaters

- Over a fifth (**22%**) of sites have high (>25mg/l NO_3) nitrate concentrations and three sites exceed the drinking water standard (50 mg/l NO_3).
- Almost half (**49%**) of all sites have increasing nitrate concentrations for the period 2013-2019.
- **8%** of sites have unsatisfactory phosphate concentrations.

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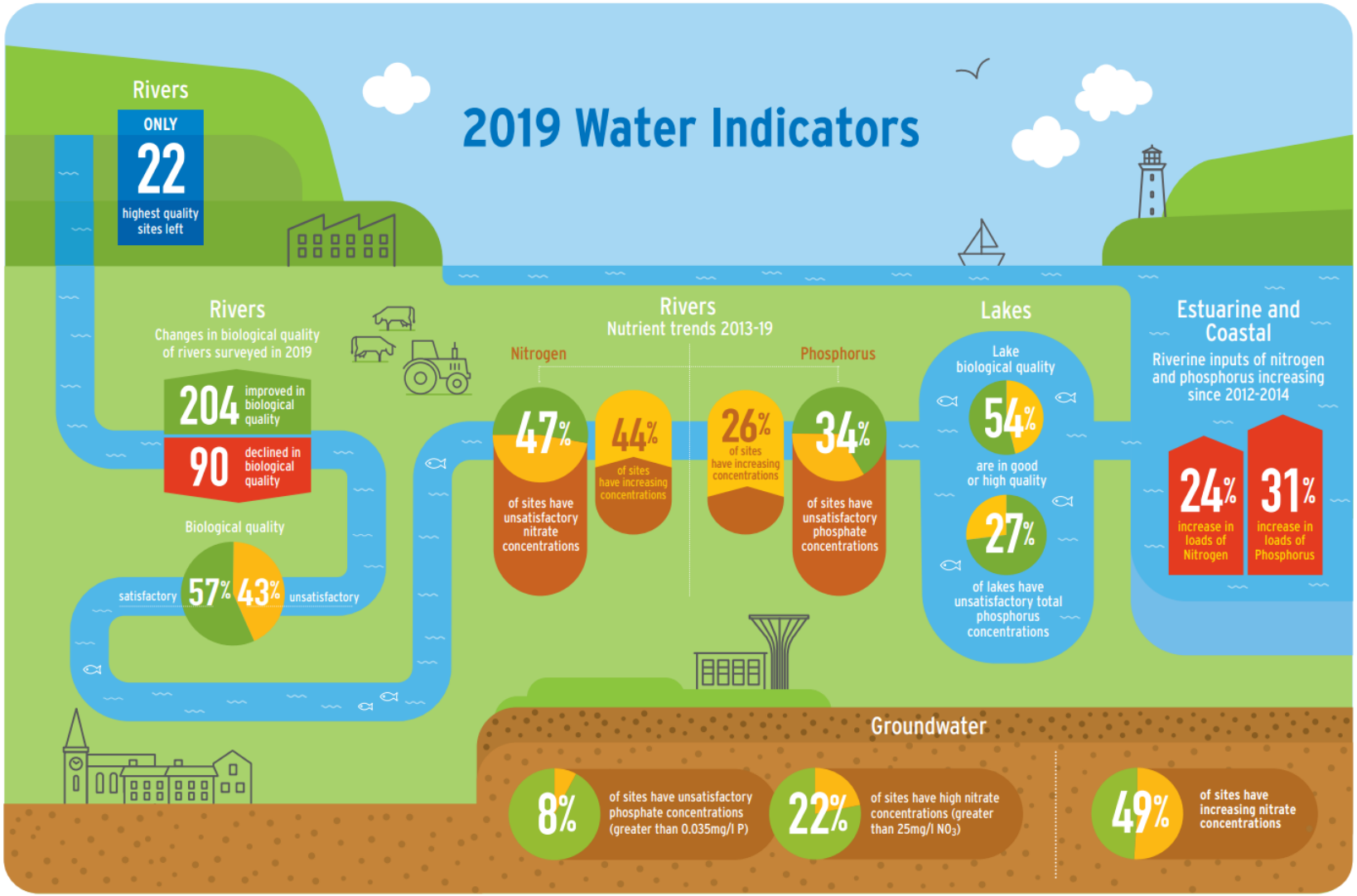
Summary Data



3rd Cycle 2022 - 2027

- Draft Plan – published early 2021
- 6 month public consultation period
- Covid challenges
- Virtual town hall type meetings
- www.catchments.ie
- www.watersandcommunities.ie