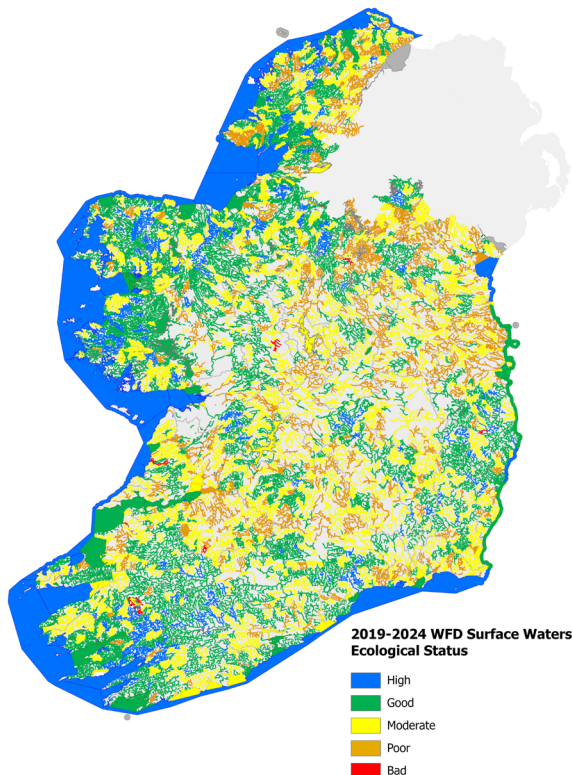




Water Quality in Ireland's Surface and Groundwaters – Trends and Challenges

Eoin McAleer
Voices and Vision for Ireland's Wetlands
June 2026

Almost half our waters in unsatisfactory condition (*WQ in Ireland 2019-24*)

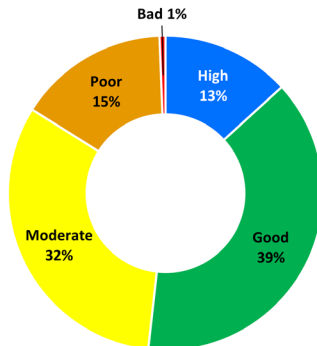


2019-2024 WFD Surface Waters Ecological Status

■ High
■ Good
■ Moderate
■ Poor
■ Bad

- Latest EPA status assessment (2019-2024) - over half (**52%**) of our surface waters are in either good or high ecological status.
- **48%** of the surface water bodies in Ireland are not as ecologically healthy or resilient as they should be.
- This is a **2% decline** from the previous assessment

Ecological Status in Surface Waters for 2019-2024
(all rivers, lakes, estuaries and coastal waters)

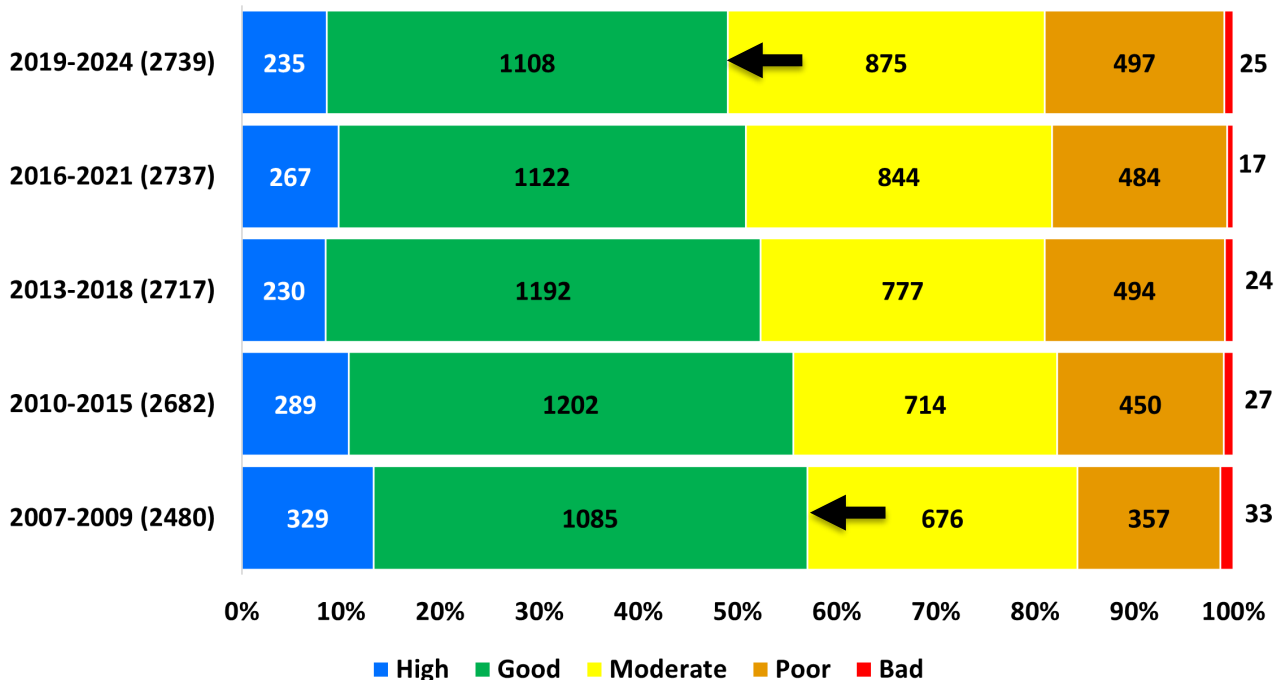


- Rivers (**48%**) – 2% decline ↓
- Lakes (**68%**) – 0.5% decline ↓
- Estuaries (**30%**) – 5% decline ↓
- Coastal Waters (**82%**) – 1% improvement ↑
- Groundwaters (**92%**) – 0.2% improvement ↑

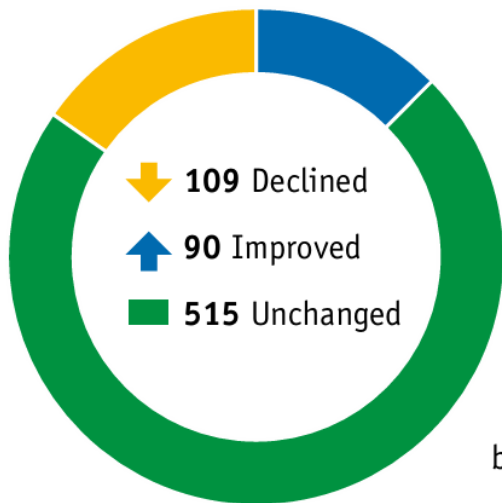
Continuing decline since 2007



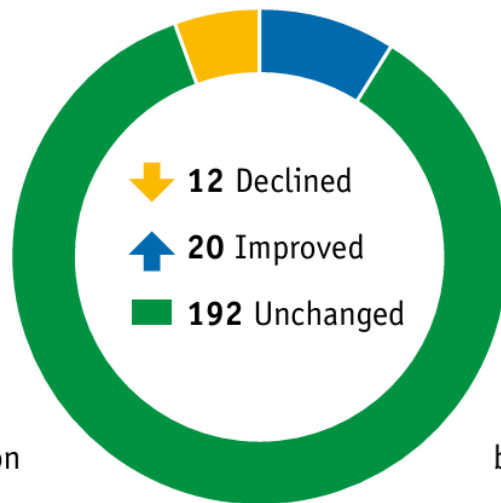
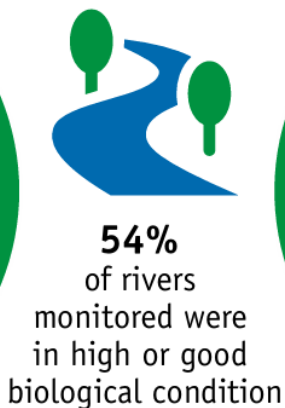
Surface Water Ecological Status
(monitored rivers, lakes, estuaries and coastal waters)



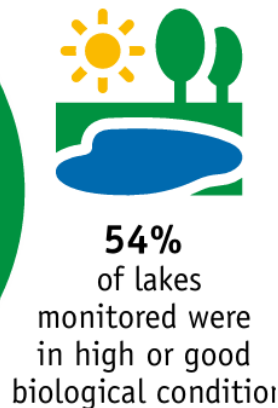
Little change evident in WQ Indicators (2025)



714
River Water Bodies
Biological Indicators



224
Lake Water Bodies
Biological Indicators

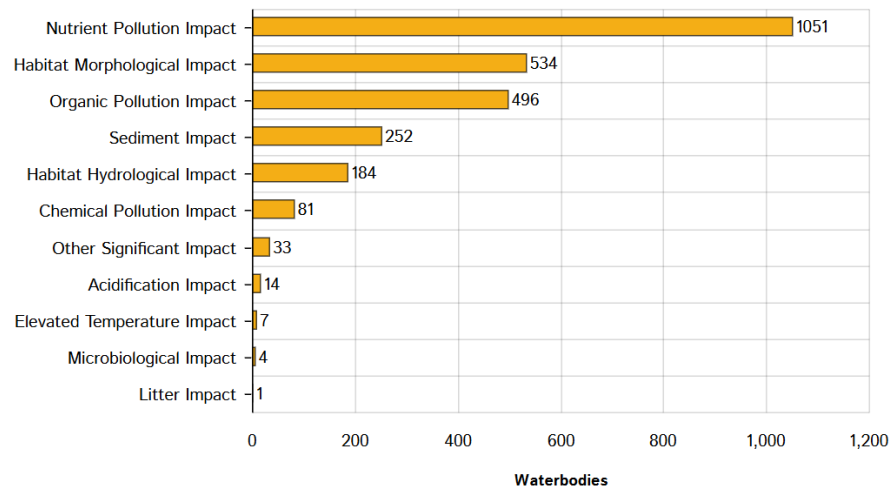


Issues affecting Water Quality

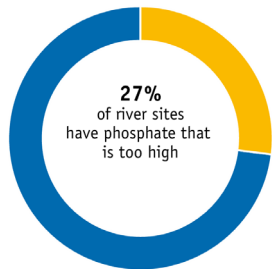


- Run-off of nutrients, sediment and pesticides from agricultural lands and farmyards;
- Activities such as land drainage, dredging and the presence of barriers such as dams, weirs or culverts in water courses;
- Discharges of poorly treated sewage from urban waste water treatment plants, domestic treatment systems and storm water overflows;
- Run-off from hard surfaces in urban environments of sediment and contaminant loaded water;
- Run-off of nutrients and sediment from forestry operations.

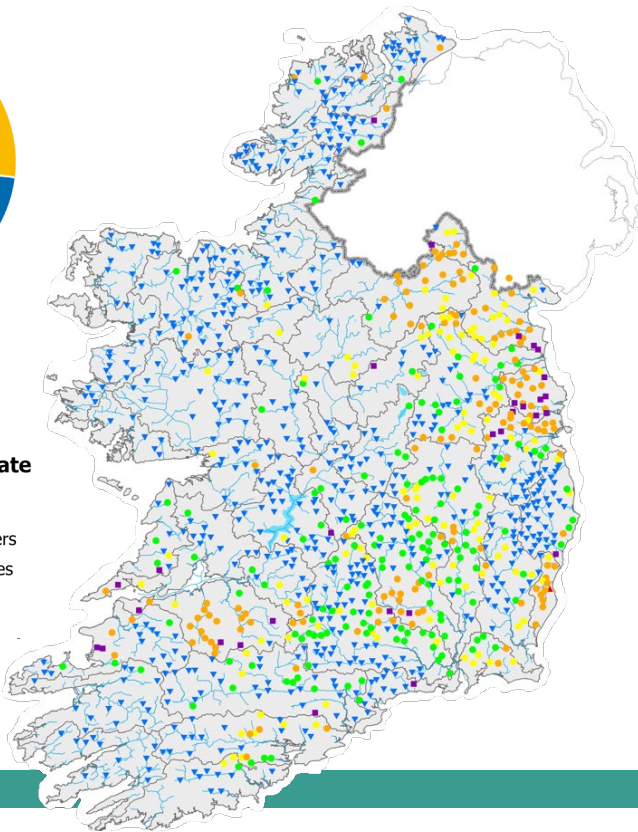
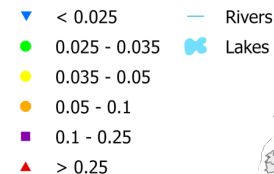
Impacts of Significant Pressures on At Risk Waterbodies



Improvement in phosphate levels where actions are targeted

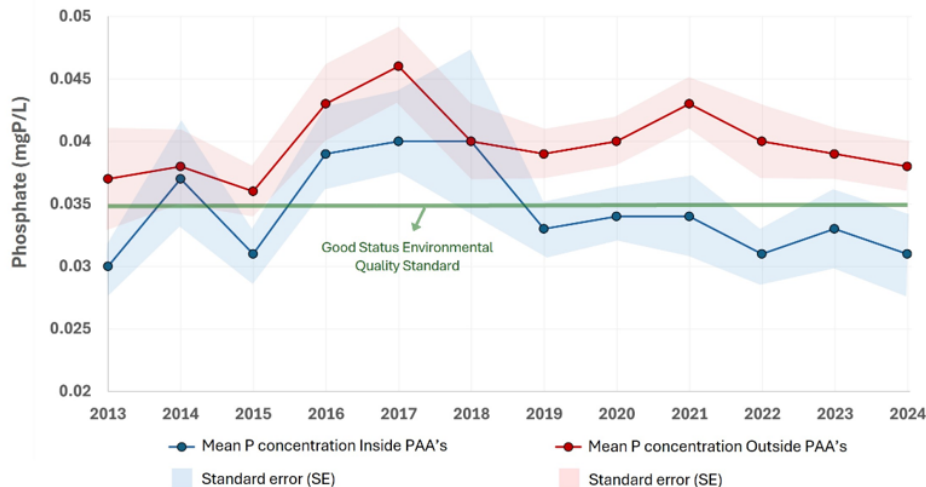


Rivers Average Phosphate
(mg/l P) 2023-2025

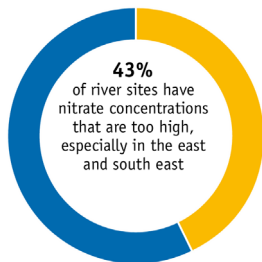


- Levels too high to support ecological health at **27%** of sites (2023-25)
- Highest levels linked to soil type and urban areas

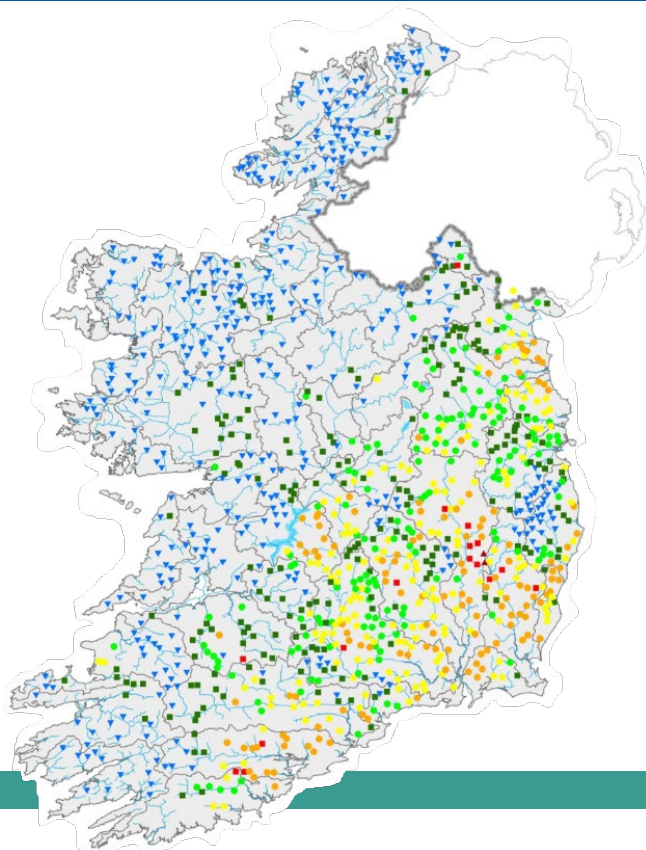
Phosphate levels inside versus outside Priority Areas for Action



Nitrate too high in the south-east



**Rivers Average Nitrate
(mg/l NO₃) 2023-2025**

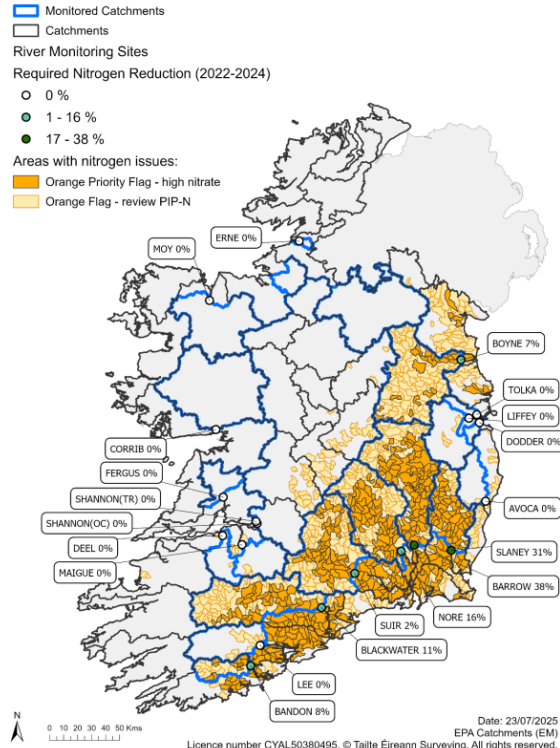


- Levels too high to support good ecological health at **43%** of sites
- Nitrogen levels are markedly higher in the east, south and southeast, compared to catchments in the west and northwest
- Reflects differences in farm practices, soil types and climate conditions.
- No long term trend of improvement

Setting expectations for Nitrogen: Scale of improvement needed



Nitrogen Load Reductions and Waterbodies with Nitrate Issues from the Farm and Landscape measures for Agriculture (FLAG) Map



Evidence-based targeting of agricultural measures to reduce nitrogen in catchments to achieve water quality objectives (*Published Q4 2025*)

- **Nitrogen load reductions (tonnes)** needed to achieve the nitrogen standard in the estuaries to protect ecological health (2.6 mg/l as N, or 11.5 mg/l as NO₃) estimated for each catchment (using data from 2022-2024)
- Range of nitrogen load reduction required: **2% - 38%**
- Indication of the relative **scale of effort** needed in different catchments to achieve water quality targets

Right Measure Right Place

Farm and Landscape measure for Agriculture (updated 2025)



Navy Flag: Waterbody with measures to reduce phosphorus, sediment, and chemical loss

- 'Break the pathway'

Red Flag: Waterbody with Measures to reduce ammonium losses / potential impacts from point sources

- Target Farmyard

Orange Flag: Waterbody in areas with Measures to reduce nitrogen losses

- 'Control losses at source'

White Flag: Waterbody in the White areas that need measures to protect

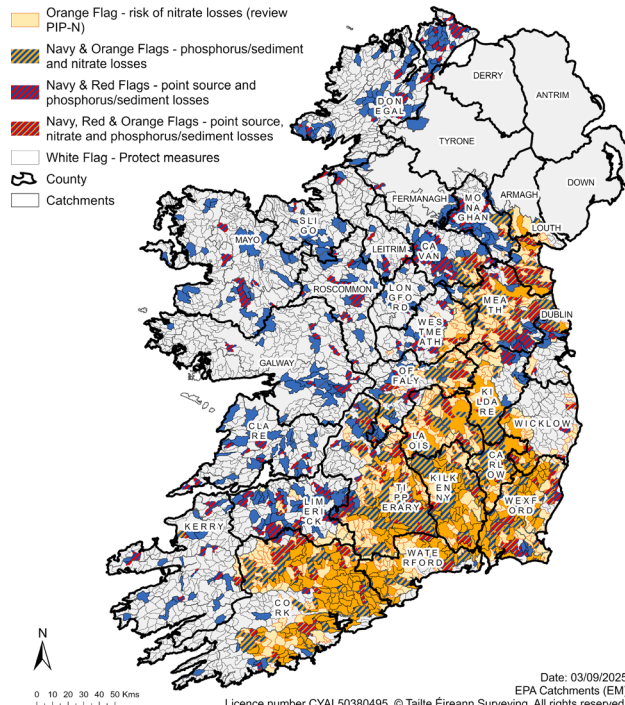
- These areas may be At Risk from other pressures

'The right measure in the right place'

Farm and Landscape measures for Agriculture (FLAG) Map

FLAG Map 2025 R1

- Navy Flag - phosphorus/sediment losses
- Orange Priority Flag - high nitrate
- Orange Flag - risk of nitrate losses (review PIP-N)
- Navy & Orange Flags - phosphorus/sediment and nitrate losses
- Navy & Red Flags - point source and phosphorus/sediment losses
- Navy, Red & Orange Flags - point source, nitrate and phosphorus/sediment losses
- White Flag - Protect measures
- County
- Catchments



Date: 03/09/2025

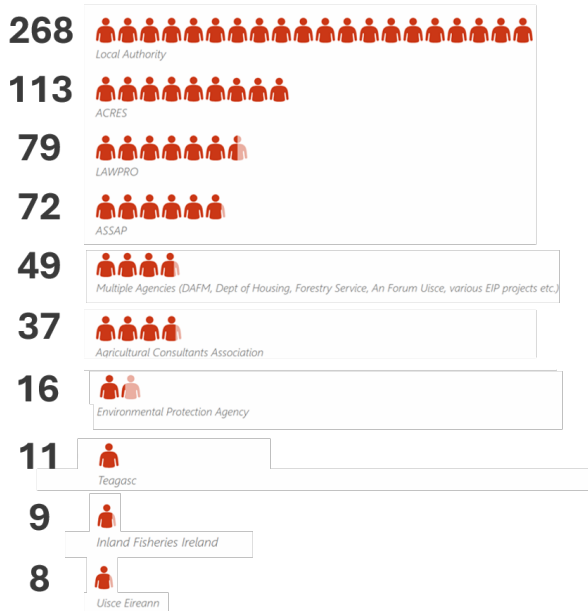
EPA Catchments (EM)

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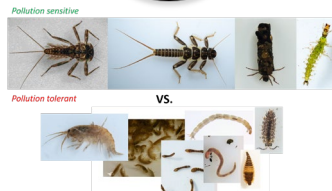
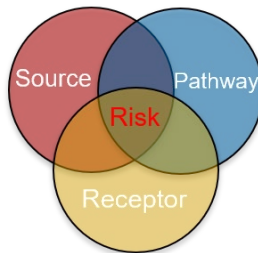
Use of the evidence base to drive action on the ground



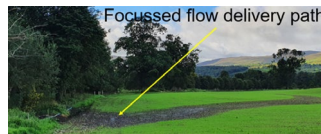
Over 600 Water Quality Practitioners Trained in Integrated Catchment Management



Integrated Catchment Management



(Photos Paul O Callaghan - LAWPRO)



Evidence Base Focusing Action

- National Ag. Inspection Programme (NAIP)
- Local Authority Waters Programme
- Farming for Water EIP
- Waters of Life
- Better Farming for Water Programme
- ACRES

Take home messages



- Water quality trends not going in the right direction
- Evidence of improvement where actions are targeted and evidence driven
- Strong evidence base to target actions and track WQ outcomes
- Shared language and understanding across agencies, stakeholders and public
- Skilled national workforce, trained in Integrated Catchment Management to deliver results
- Scale and pace of implementation needs to increase