
Early insights indicator report
**Nitrogen concentrations in
selected major rivers**
January-December 2024



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Overview

This report series presents an early insight into nitrogen concentrations at a selected number of key monitoring sites. This report covers the period up to the end of December 2024. The previous report, which was also the first one in the series, was published in late 2024¹ and covered the first six months of 2024. The early insights indicator is based on the nitrate concentration data for 20 representative river monitoring sites which are situated at the most downstream monitoring locations on the major rivers around Ireland. A map of the locations of the sites and the catchments they represent is presented in Figure 1. Further information on the monitoring sites involved and data processing are available in the supporting information supplied with this report. This report includes data for January to December 2024, inclusive. The annual nitrogen and phosphorous indicator assessments, which are based on the national nitrates monitoring network, will be published later in the year as will the more comprehensive, 3-yearly, Water Quality in Ireland Report for the period 2019-2024.

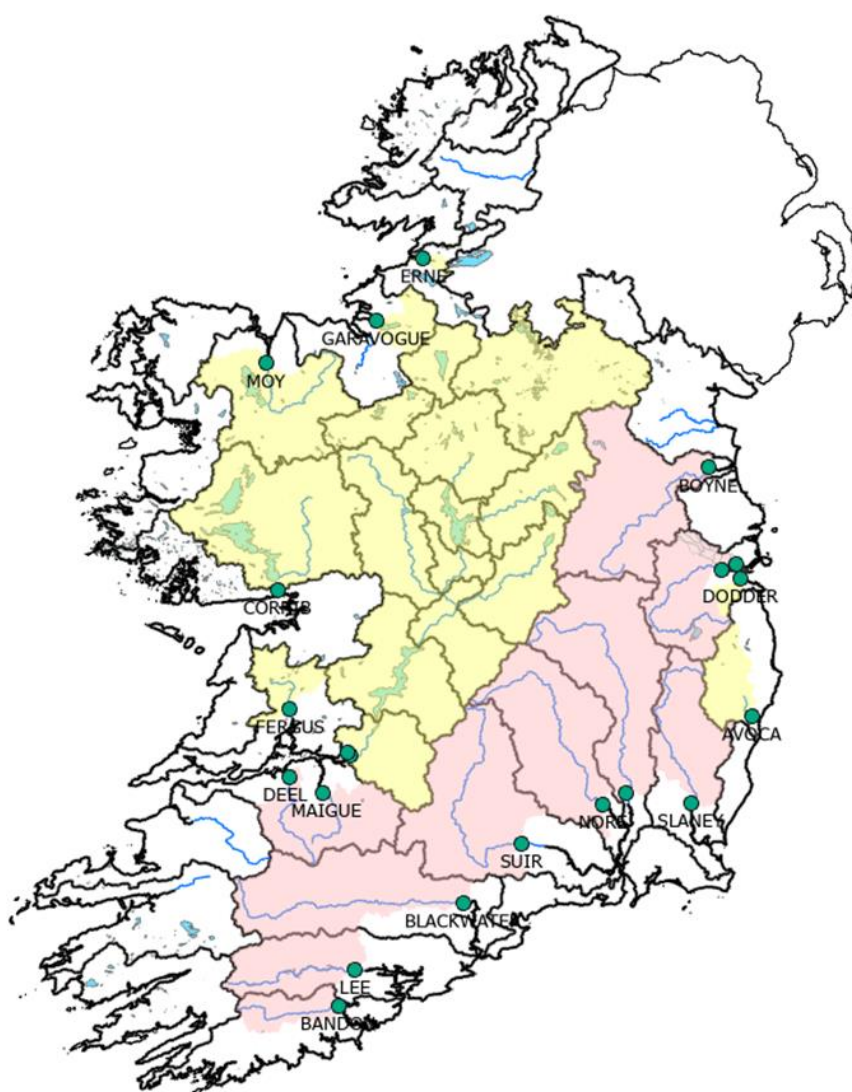


Figure 1: Location of the early insights nitrogen indicator monitoring stations and their contributing catchment areas².

¹ [Early-insights-indicator-report---Nitrogen-concentrations-in-selected-major-rivers-January-June-2024.pdf](#)

² The map has been amended slightly since the first edition of this report to more accurately reflect the catchment areas draining to each of the selected monitoring stations.

Early insight nitrogen concentration data at representative sites for Jan-Dec 2024

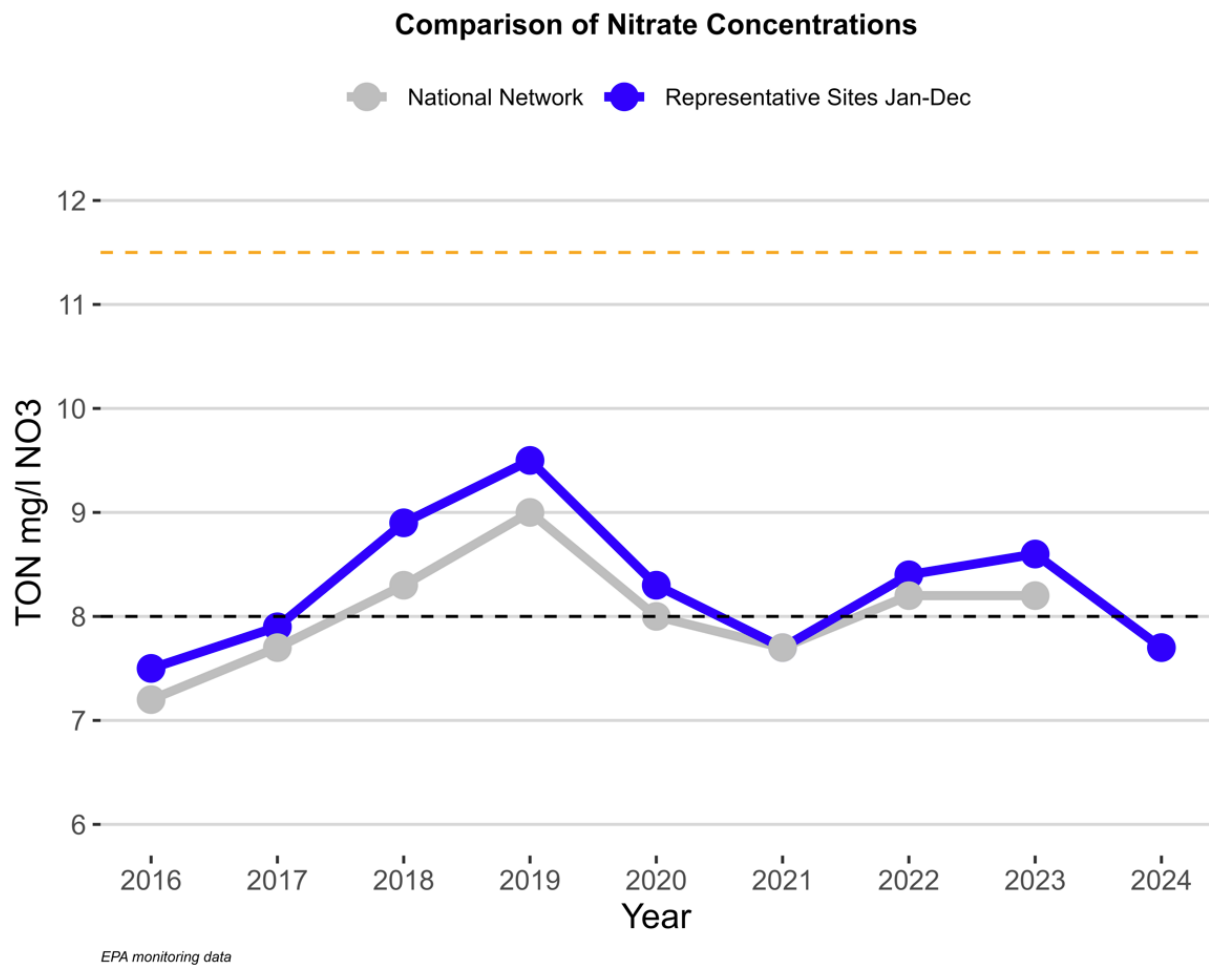


Figure 2: Early insight nitrogen concentrations for Jan-Dec (blue) periods of each year from 2016 to 2024 at 20 representative sites located around the country. The annual nitrate concentrations for the whole monitoring network (grey), and the levels to maintain good water quality in rivers (black dash) and in marine waters (orange dash) are also shown.

Nitrate concentrations at the representative sites over the 12-month period were lower than the previous year. This is consistent with the suggestion of overall lower nitrate concentrations in 2024 indicated in the 2024 January-June data. Historically, the annual average based on the full national network (grey) is typically lower than the annual average at the representative sites (blue). This highlights that the early insights indicator generally provides a conservative estimate of the likely nitrogen concentrations nationally. A decline in nitrate concentrations using the full national network is therefore also likely.

Early insight nitrogen concentration data at representative sites inside and outside the Catchments of Concern

The changes in nitrate concentrations for the monitoring sites within the Catchments of Concern where nitrogen concentrations are too high, and monitoring sites in catchments that are meeting their target nitrogen levels, were similar, with both showing a reduction in 2024 relative to the previous year (Figure 3). However, nitrogen concentrations in the Catchments of Concern remain too high overall.

Early insight annual nitrogen concentrations for representative sites inside and outside the Catchments of Concern

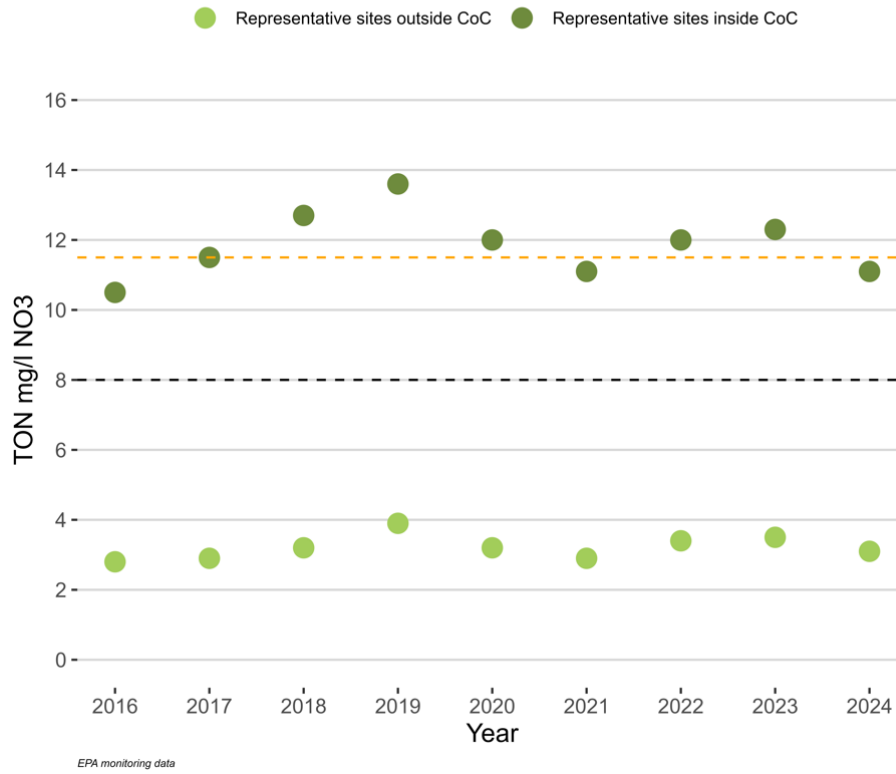


Figure 3: Early insight nitrogen annual average concentrations for the Catchments of Concern where nitrogen concentrations are too high (Figure 1, red shading) and outside the Catchments of Concern (Figure 1, yellow shading).

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