



Water quality monitoring report on nitrogen and phosphorus concentrations in Irish waters 2020

ENVIRONMENTAL PROTECTION AGENCY

The EPA is responsible for protecting and improving the environment as a valuable asset for the people of Ireland. We are committed to protecting people and the environment from the harmful effects of radiation and pollution.

The work of the EPA can be divided into three main areas:

Regulation: *Implementing regulation and environmental compliance systems to deliver good environmental outcomes and target those who don't comply.*

Knowledge: *Providing high quality, targeted and timely environmental data, information and assessment to inform decision making.*

Advocacy: *Working with others to advocate for a clean, productive and well protected environment and for sustainable environmental practices.*

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- Large-scale industrial, waste and petrol storage activities;
- Urban waste water discharges;
- The contained use and controlled release of Genetically Modified Organisms;
- Sources of ionising radiation;
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- Engage with national and regional governance and operational structures to implement the Water Framework Directive;
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- Support National, EU and UN Climate Science and Policy development activities.

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- Produce the State of Ireland's Environment and Indicator Reports;
- Monitor air quality and implement the EU Clean Air for Europe Directive, the Convention on Long Range Transboundary Air Pollution, and the National Emissions Ceiling Directive;
- Oversee the implementation of the Environmental Noise Directive;
- Assess the impact of proposed plans and programmes on the Irish environment.
- Environmental Research and Development
- Coordinate and fund national environmental research activity to identify pressures, inform policy and provide solutions;
- Collaborate with national and EU environmental research activity.

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- Monitoring radiation levels and assess public exposure to ionising radiation and electromagnetic fields;
- Assist in developing national plans for emergencies arising from nuclear accidents;
- Monitor developments abroad relating to nuclear installations and radiological safety;
- Provide, or oversee the provision of, specialist radiation protection services.

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- Provide independent evidence-based reporting, advice and guidance to Government, industry and the public on environmental and radiological protection topics;
- Promote the link between health and wellbeing, the economy and a clean environment;
- Promote environmental awareness including supporting behaviours for resource efficiency and climate transition;
- Promote radon testing in homes and workplaces and encourage remediation where necessary.

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- Work with international and national agencies, regional and local authorities, non-governmental organisations, representative bodies and government departments to deliver environmental and radiological protection, research coordination and science-based decision making.

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The EPA is managed by a full time Board, consisting of a Director General and five Directors. The work is carried out across five Offices:

- Office of Environmental Sustainability
- Office of Environmental Enforcement
- Office of Evidence and Assessment
- Office of Radiation Protection and Environmental Monitoring
- Office of Communications and Corporate Services

The EPA is assisted by advisory committees who meet regularly to discuss issues of concern and provide advice to the Board.



WATER QUALITY MONITORING REPORT ON NITROGEN AND PHOSPHORUS CONCENTRATIONS IN IRISH WATERS (2020)

ENVIRONMENTAL PROTECTION AGENCY

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Report published by Environmental Protection Agency, Ireland

Cover photo: Ruth Little, EPA

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ISBN 978-1-80009-005-7

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Background to this Report

Regulation 38 of the European Union (Good Agricultural Practices for the Protection of Waters) (Amendment) Regulations (S.I. 65 of 2018) requires the EPA to prepare an annual report of the results of water quality monitoring to support the assessment of the impact of the nitrate's derogation as required by the Commission Implementing Decision (EU) 2018/209.

In preparing this report, the EPA has used data from the National Water Framework Directive Monitoring Programme. The report summarises phosphorus and nitrate data, taking account of the water quality reporting guidance used for Council Directive 91/676/EEC (the Nitrates Directive).

Nitrogen and phosphorus data are presented for groundwater, rivers, lakes, estuarine and coastal waters. Nitrogen results are expressed as nitrate and phosphorus results are measured as molybdate reactive phosphate or total phosphorus. The results are expressed as annual means in the case of rivers, lakes and groundwater or as winter medians for estuarine and coastal waters. The figures and tables in this report summarise the mean or median annual concentrations in 2020 and mean or median annual concentration changes in the last decade.

While both nitrate and phosphorus are important drivers of nutrient enrichment and pollution (eutrophication) their impact should be considered in conjunction with the overall ecological condition of our waters. The EPA's [Water Quality in Ireland](#) report, covering the period 2013-2018, provides a full assessment of the chemical and ecological water quality and WFD status of Irish waters. The EPA's [Water Quality Indicators](#) report for 2020 provides a snapshot of nitrate, phosphorus and other water quality indicators.

Public access to the nutrient data for the sites in the WFD monitoring programme is available on www.catchments.ie.

Key Water Quality Findings

- ▲ Nitrate concentrations in rivers, groundwaters and estuaries have been increasing since 2013.
 - ▶ In 2020, 32% of rivers had mean nitrate concentrations greater than 11.5¹ mg/l NO₃. River concentrations above 11.5 mg/l NO₃ may be impacting on the ecological health of the receiving marine waters.
 - ▶ Since 2013, the number of rivers with concentrations greater than 11.5 mg/l NO₃ has increased by over 10%. There have also been increases of more than 1.5 mg/l NO₃ in over a third (35%) of rivers since 2013.
 - ▶ A quarter of groundwater sites had mean nitrate concentrations greater than 25 mg/l NO₃ in 2020. There has been a net increase of more than 1.5 mg/l NO₃ at almost half (42%) of all groundwater sites since 2013.
 - ▶ Nearly a fifth (18%) of estuarine and coastal water bodies had winter median nitrate concentrations greater than 11.5 mg/l NO₃.
- ▲ The greatest increases in riverine and groundwater nitrate concentrations have been in the south and south east of the country. Ten of the 16 monitored estuaries and coastal waters in this south east having concentrations above the nitrogen standard for marine waters.
- ▲ River and lake phosphorus concentrations are highest, and have increased most, in areas with poorly draining soils.
 - ▶ Over a quarter (29%) of river sites have mean phosphorus concentrations greater than the good status EQS (0.035 mg/l P) in 2020.
 - ▶ Similarly, 29% of lakes have mean phosphorus concentrations greater than the good status EQS (0.025 mg/l P).

Summary assessment

The 2013-2018 assessment of water quality in Ireland (EPA, 2019) found that only just over half of our rivers and lakes were in satisfactory ecological health and overall water quality was in decline. The picture for our estuaries was even more stark with only 38% in satisfactory condition. The assessment indicated the main problem damaging our waters was the presence of too much phosphorus and nitrogen.

This report finds that nitrogen concentrations remain too high in rivers, groundwater and estuaries in the south, south east and east of Ireland; and the concentrations have been increasing since 2013. Over a third (35%) of all river sites have seen an increase of more than 1.5 mg/l NO₃ in the annual mean concentration since 2013. A quarter of groundwater sites are also showing an increase of more than 1.5 mg/l NO₃. The greatest increases in nitrate have been in the south east and south, with 10 of the 16 monitored estuaries and coastal waters in this south east having concentrations above the nitrogen standard for marine waters, and a quarter of these waterbodies have had an upward trend of more than 1.5 mg/l NO₃ since 2013.

In relation to phosphorus the report finds that over a quarter of river sites (29%) and lake sites (29%) have mean phosphorus concentrations greater than the good status EQS (0.035 mg/l P and 0.025 mg/l P respectively). The highest river and lake phosphorus concentrations

1 For the purposes of catchment nutrient management, it is assumed that if the nitrate concentrations in streams and rivers throughout the contributing catchment are maintained at less than 11.5 mg/l NO₃, then the statutory dissolved inorganic nitrogen standard of 2.6 mg/l as N will be achieved in the receiving marine waters.

are found in areas with poorly draining soils and it is in these areas that concentrations have increased the most since 2013. For an average Irish stream catchment, average losses of only 200 g/ha from land are enough to cause a water quality issue. Agriculture and wastewater discharges are the main sources of phosphorus in surface water.

The increase in nutrient concentrations in water since 2013 represents a worrying development in the context of the status objectives of the Water Framework Directive (WFD) as 29% of rivers and lakes already exceed the phosphorus environmental quality standards and 32% of rivers had concentrations higher than 11.5 mg/l NO₃, which may be contributing to a breach of the environmental quality standard in the receiving marine waters.

As part of the development of the draft River Basin Management Plan the EPA has quantified the nutrient load reductions needed to achieve water quality outcomes for major river catchments in Ireland that discharge to monitored coastal waters (EPA, 2021a). Thirteen river catchments have elevated nitrogen concentrations that may be contributing to a breach of the environmental quality standard in the receiving marine waters; all of which are located along the south, south east and east coasts. The relative nitrogen load reduction needed in each catchment has been determined by calculating the difference between the annual nitrogen load and the nitrogen load required to maintain the concentration below the EQS of 2.6 mg/l (as N) in the receiving estuaries and coastal waters².

The EPA assessment shows that comparatively the nitrogen load reduction required in the Suir, Slaney and Barrow catchments in the south east, and the Blackwater catchment in the south is substantially higher than the other nine catchments with elevated nitrogen concentrations. The analysis includes nitrogen load reduction assessments and the generation of load reduction maps at the sub-catchment level and indicates that approximately 85% of the nitrogen in these catchments is from agricultural sources. Assessments by the EPA have shown that there is a clear nitrogen response in water to changes in herd numbers and gross nitrogen balance (EPA, 2020).

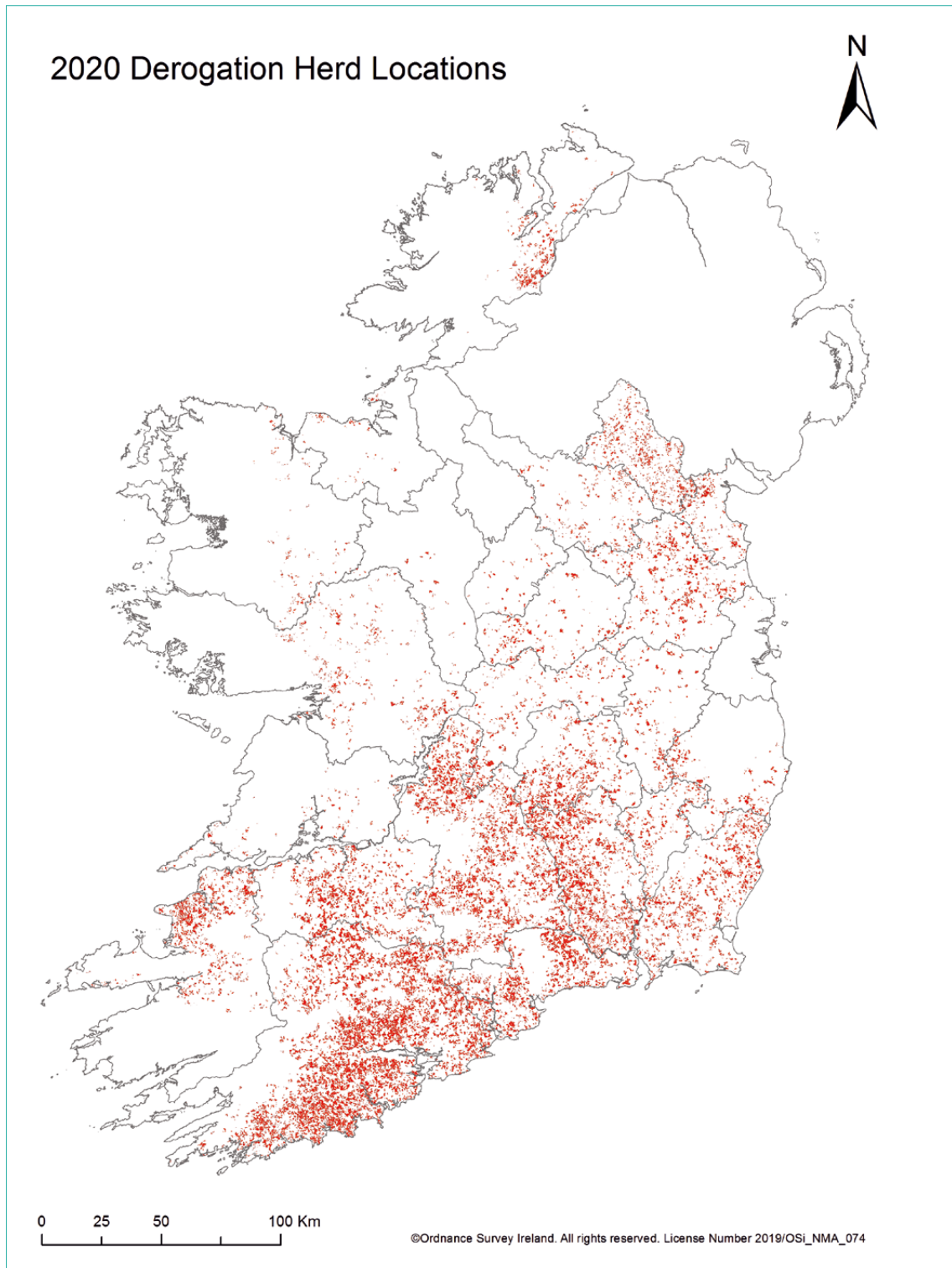
This evidence base can be used by the policy makers to help prioritise measures to support good water quality, and healthy aquatic ecosystems³ and meet its statutory obligations.

Map 1 shows the location of derogation farm holdings⁴ in 2020 and the highest densities are found along the southern seaboard, the south east and to a lesser extent along the east coast.

2 Nitrate concentrations are expressed as mg/l NO₃, and the standard to protect the receiving estuarine and coastal water is expressed as mg/l N. To convert Nitrate to Nitrogen, divide by 4.43 e.g. 11.5 mg/l NO₃ = 2.6 mg/l N.

3 Some catchments may also need additional water quality measures such as reductions in phosphorus, chemicals and sediment, or improvements in hydromorphology or some of the biological elements, but for the purposes of this assessment, the focus is on nitrogen.

4 Derogation farms are those which have been granted a derogation from the standard limit of 170 kg nitrogen per hectare of livestock manure from grazing livestock which can be applied to the land each year on grassland farms. Farms granted derogations may apply manure up to a limit of 250 kg nitrogen per hectare (including by the animals themselves).



Map 1: National distribution of derogation herds in 2020
(Source: Department of Agriculture, Food and the Marine)

Results of Water Quality Monitoring

The following section sets out the results of monitoring for groundwater, rivers, lakes and transitional and coastal waters. Groundwater monitoring data were averaged and are presented for monitoring undertaken during 2020, while the 2020 surface water data presented represents the average or median concentration between 2018-2020. Water quality trend analysis were undertaken using data since 2013 for groundwater, rivers and lakes and 2010 for transitional and coastal waters. These years have been selected as they represent a point in time when nationally nutrient concentrations started to increase.

The nitrate and phosphorus water quality data presented hereafter, uses a common, comparable set of water quality ranges across all waterbody types to allow for consistent analysis across water types and between member states. The ranges have been standardised across all water types and where applicable align with environmental quality standards and/or environmental limits of concern for different water quality categories.

Groundwater

Nitrate in Groundwater

Figure 1 summarises the mean nitrate concentrations for the 194 national groundwater monitoring programme sites monitored in 2020.

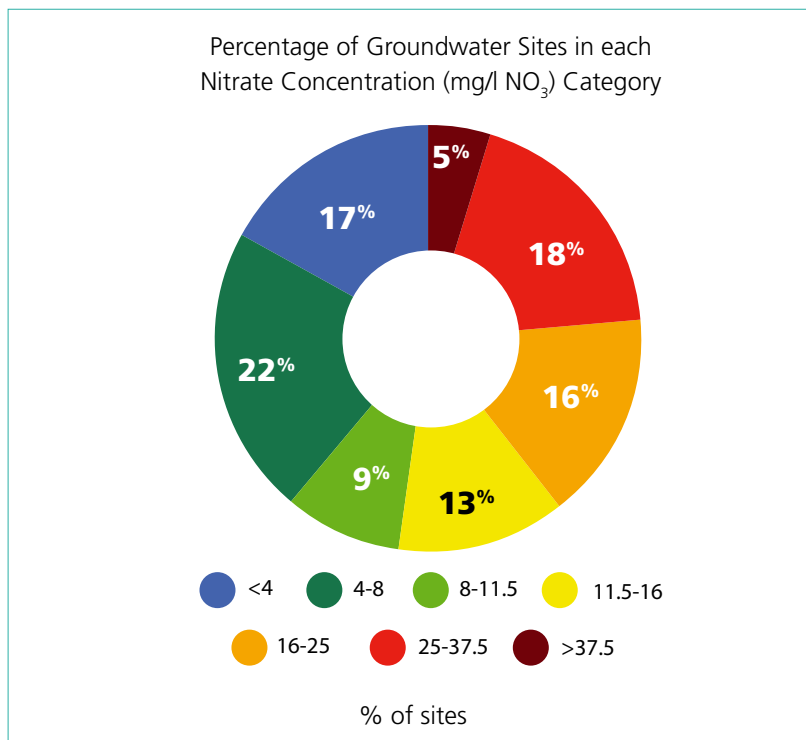
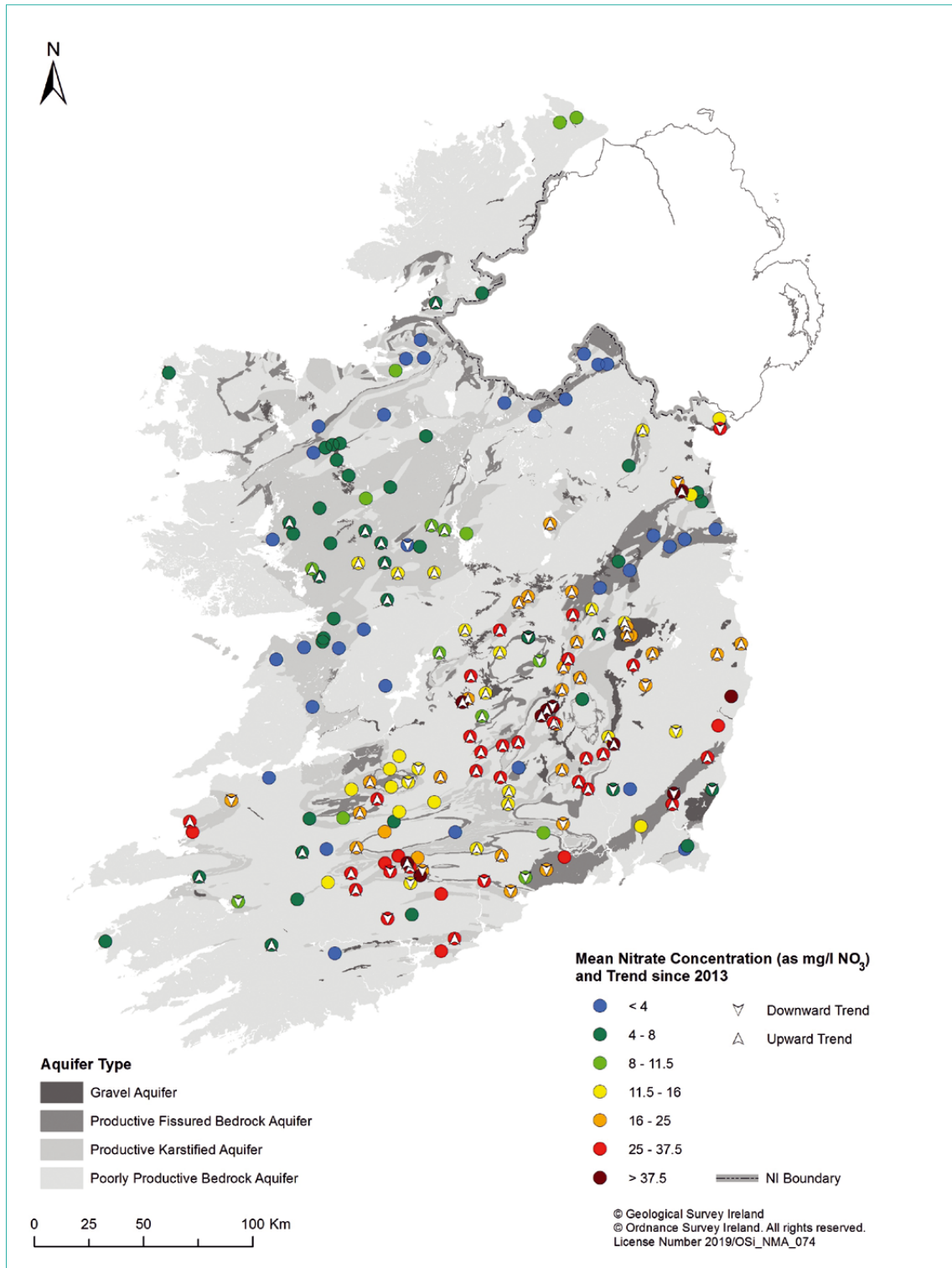


Figure 1: Mean nitrate concentrations in groundwater during 2020

In 2020, 25% of groundwater monitoring sites had a mean nitrate concentrations greater than 25 mg/l NO₃ compared with 22% in 2019 and 10.4% of sites in 2013. Map 2 highlights that most of the sites with concentrations greater than 25 mg/l NO₃ are in the south and south-east of Ireland. Ten monitoring sites exceeded the Irish Threshold Value of 37.5 mg/l NO₃. Three of these sites had a mean nitrate concentration greater than the drinking water standard of 50 mg/l NO₃.



Map 2: Mean nitrate concentrations in groundwater during 2020 and concentration trends since 2013

Table 1 shows that nitrogen concentrations in groundwater are increasing. Even when inter annual variability has been considered, there has been a net increase of more than 1.5 mg/l NO₃ (i.e. an average annual change of 0.05 mg/l N) in the last seven years at almost half (42%) of all sites. Map 2 indicates there has been an increasing nitrate trend at almost all sites in the south-east since 2013.

Table 1: Comparative change in groundwater nitrogen concentrations since 2013

Trend	Number of Sites	% Sites
Average annual increase >0.05 mg/l N	81	42
No trend or static	88	45
Average annual decrease >0.05 mg/l N	25	13
Total	194	100.0

Figure 2 indicates that the average groundwater nitrate concentration in the south east⁵ is approximately 50% higher than the average concentration in the remainder of the country. Figure 2 also highlights that the average groundwater nitrate concentration in the south east has largely mirrored the national trend since 2013.

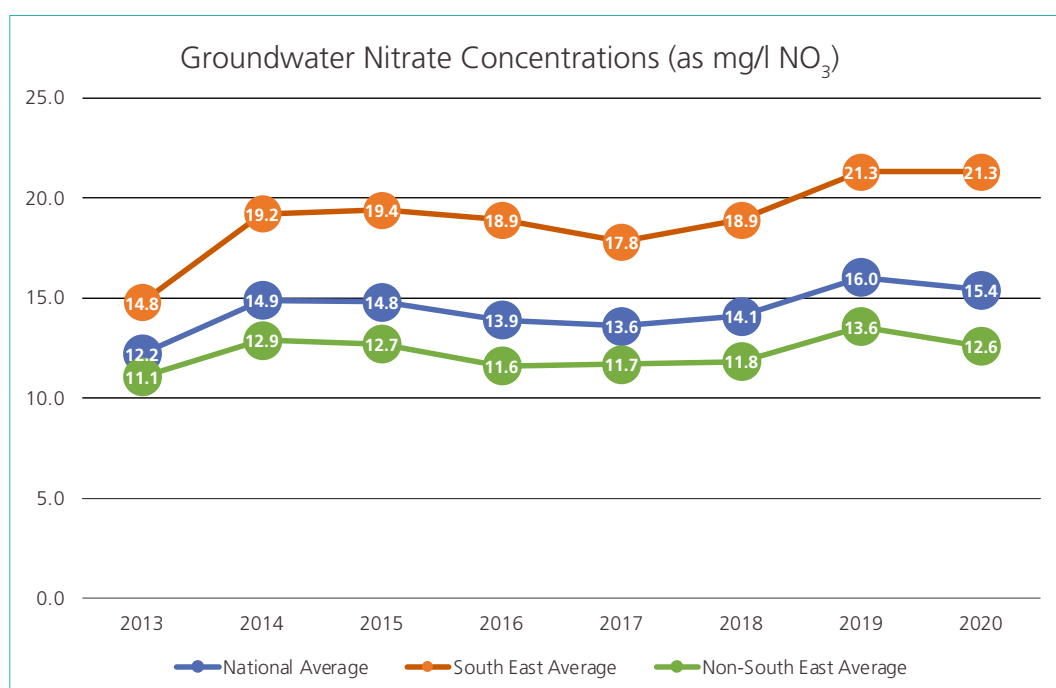


Figure 2: Groundwater nitrate concentrations since 2013

Phosphorus in Groundwater

Figure 3 summarises the mean phosphorus concentrations (measured as molybdate reactive phosphorus (MRP)) for the 193 sites in the national groundwater monitoring programme sites during 2020. Figure 3 shows that 8% of monitoring sites had mean phosphorus concentrations greater than the Irish threshold value of 0.035⁶ mg/l P.

⁵ The south east includes hydrometric areas 11-17, which relates to the area covered by the South East River Basin District, as reported in the first WFD River Basin Management Plan.

⁶ This threshold value is the WFD Good Status EQS for rivers

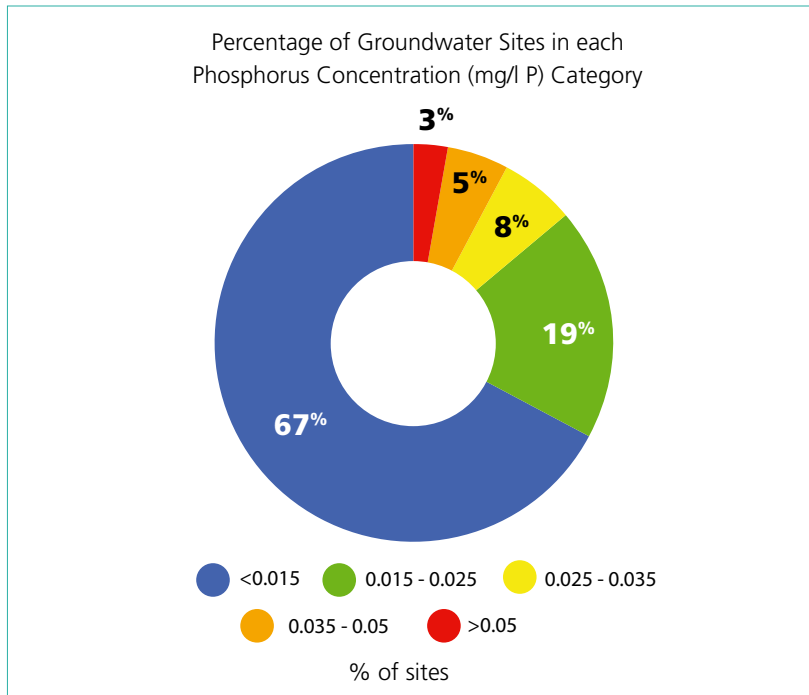


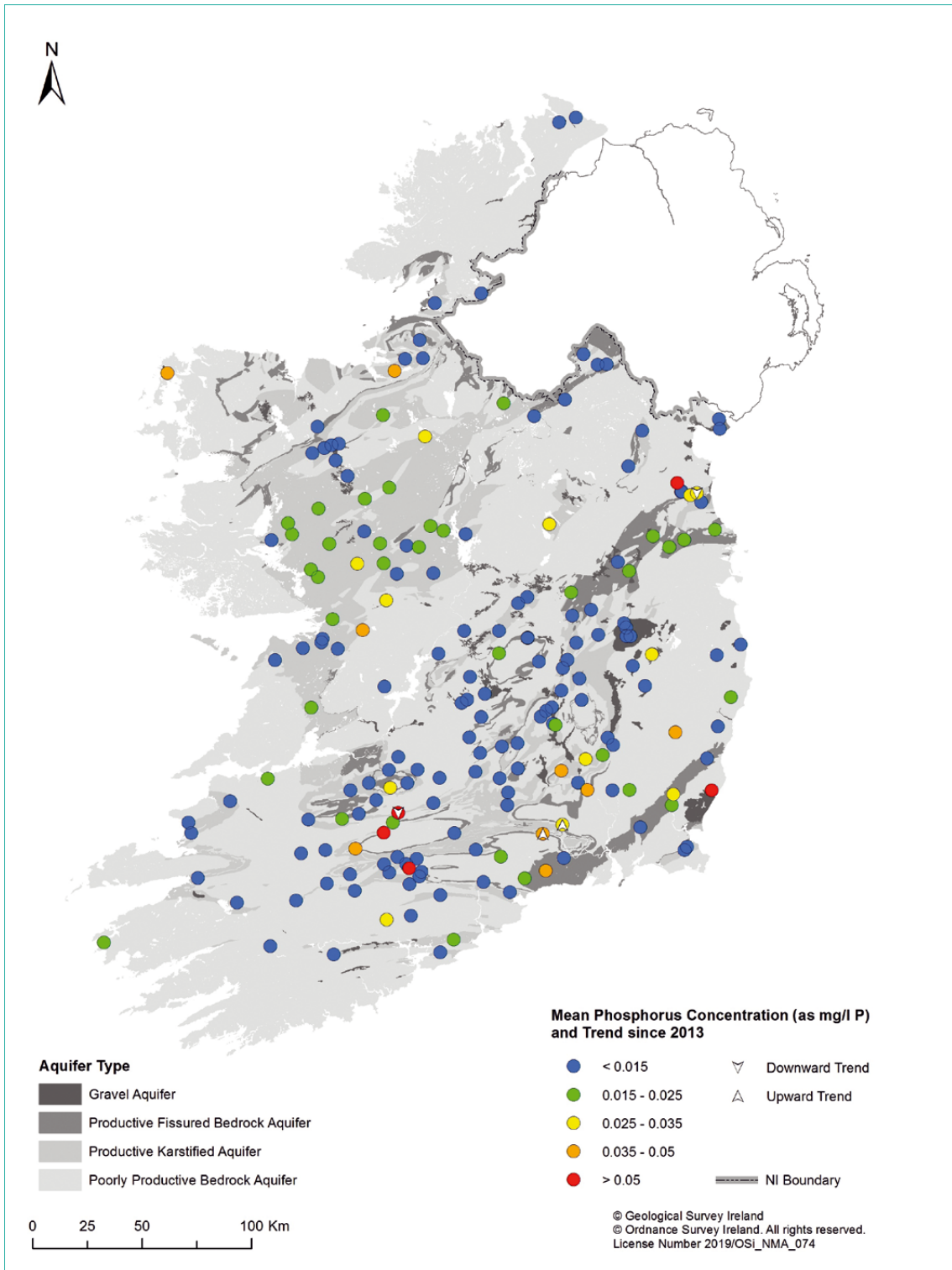
Figure 3: Mean phosphorus concentrations in groundwater during 2020

Table 2 indicates that since 2013, groundwater phosphorus concentrations have remained stable and Map 3 confirms that there is no regional pattern to the increases or decreases that could be correlated with regional agricultural intensification or presence of derogation farms.

Table 2: Comparative change in groundwater phosphorus concentrations since 2013

Trend	Number of Sites	% Sites
Average annual increase >0.002 mg/l P	2	1
No trend or static	189	98
Average annual decrease >0.002 mg/l P	2	1
Total	193	100.0

This validates the conceptual understanding that groundwater only provides a phosphorus pathway to surface waters in areas with extreme groundwater vulnerability i.e. where there is little or no soil available to bind up the phosphorus before it reaches groundwater. The presence of rock outcrop and shallow soils can be prohibitive for grass growth, resulting in less intensive farming, and therefore areas of extreme groundwater vulnerability do not typically correspond to high phosphorus loads being applied to the land, although any losses that do occur may readily enter groundwater.



Map 3: Mean phosphorus concentrations in groundwater during 2020 and concentration trends since 2013

Rivers

Nitrate in Rivers

Figure 4 summarises the mean nitrate concentrations at 1,326⁷ river monitoring sites from the national river monitoring programme in 2020.

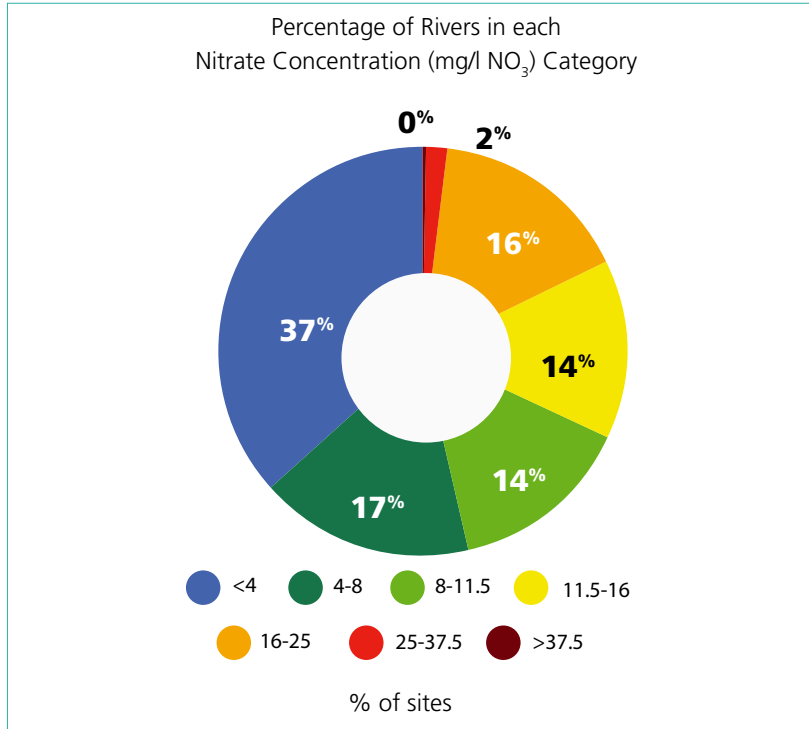


Figure 4: Mean nitrate concentrations at river monitoring sites in 2020

Thirty-two percent of river sites have concentrations greater than 11.5 mg/l NO₃, and Map 4 shows that most of the rivers in the south east have concentrations above this value. The average nitrate concentration in rivers in the south east is of concern as these concentrations contribute to an increase in the growth of algae and aquatics plants in rivers and the downstream estuaries and coastal waters, which impacts on aquatic ecosystem health.

⁷ Only those monitoring sites that have been consistently monitored since 2007 and that have at least four samples each year have been included in the assessment.

Figure 5 shows that, in the past year, there has been a slight reduction in the percentage of rivers with concentrations greater than 11.5 mg/l NO₃. However, since 2013, the number of rivers with concentrations greater than 11.5 mg/l NO₃ has increased by over 10%. Figure 5 also shows that the average river nitrate concentration in the south east is approximately double that of the rest of the country.

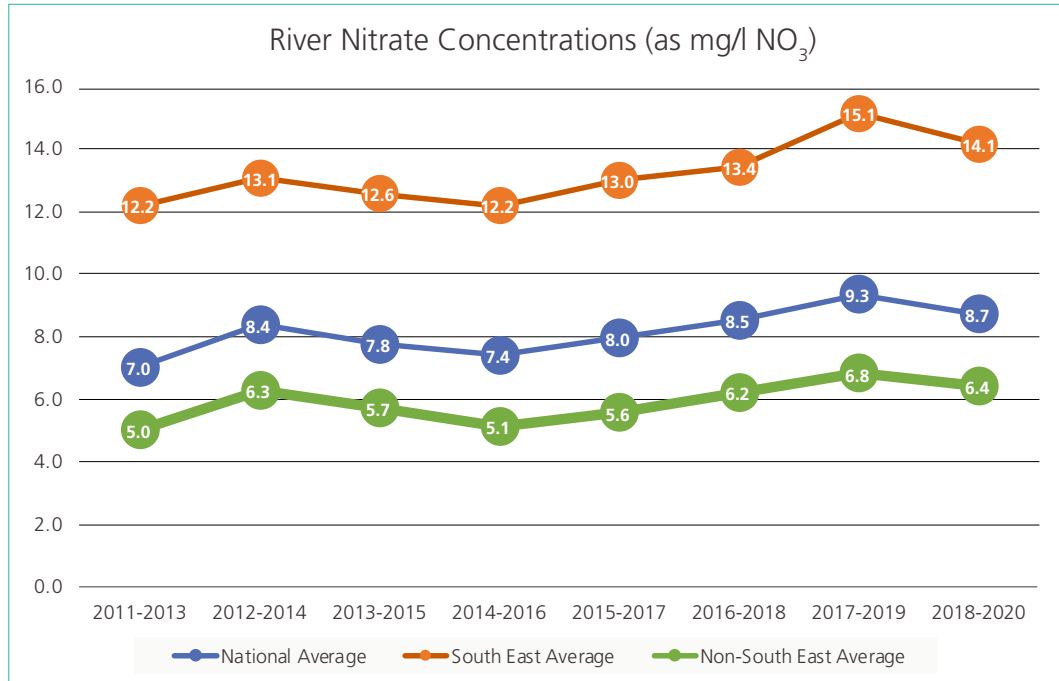
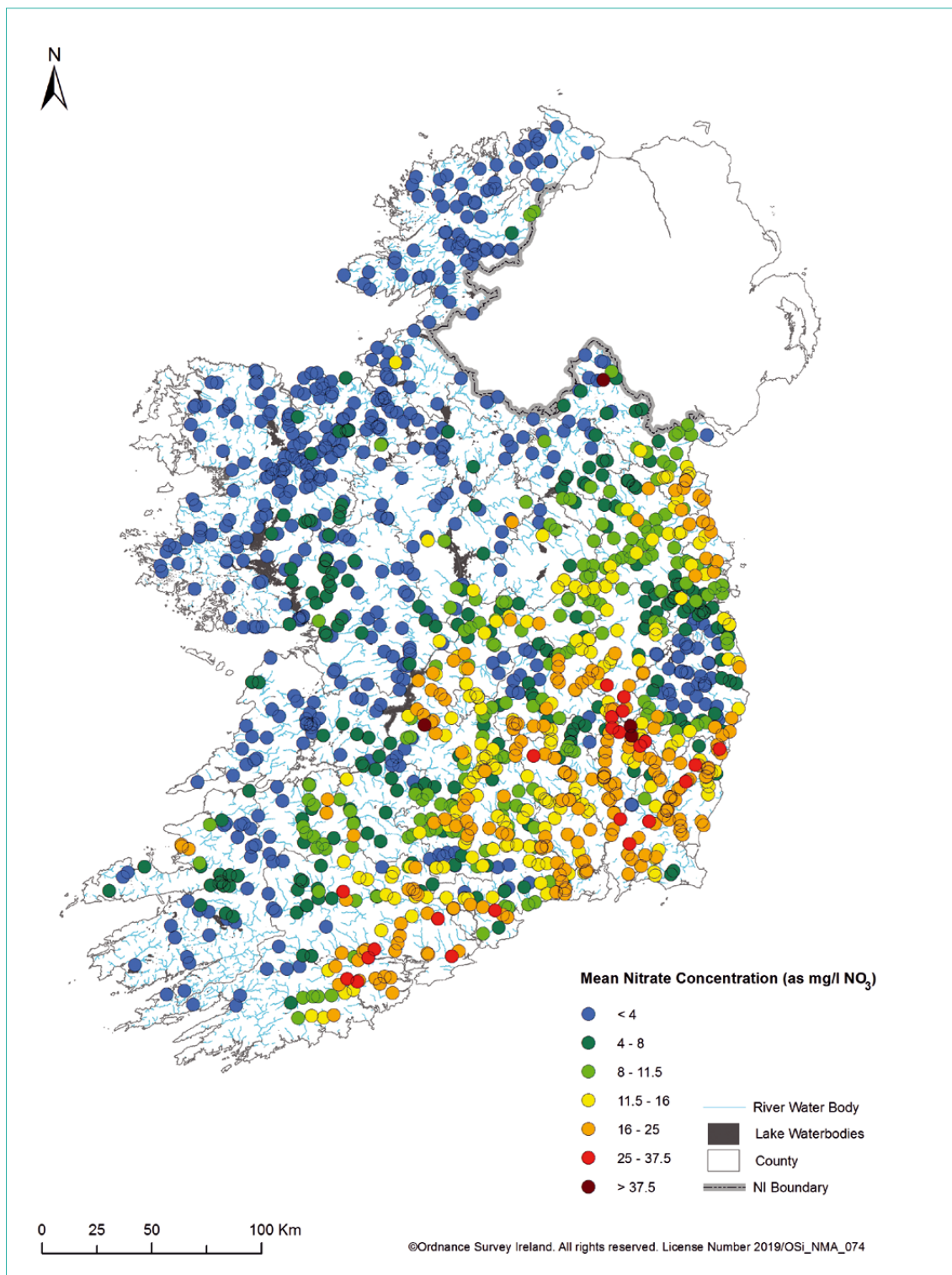


Figure 5: Riverine nitrate concentrations since 2013

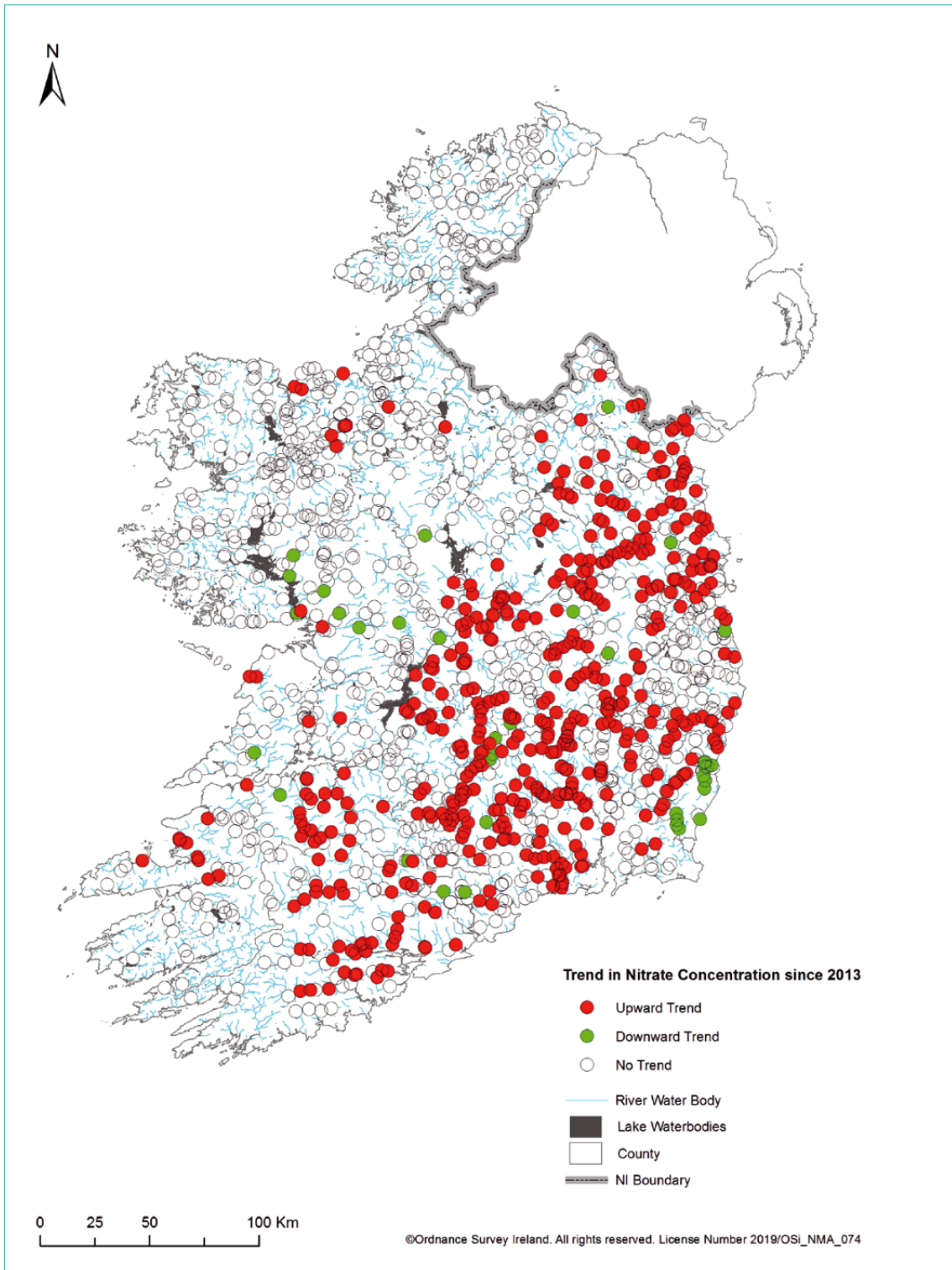
Table 3 highlights that since 2013 there have been net increases of more than 1.5 mg/l NO₃ at 35% of river sites. Map 5 indicates that the greatest increases have been in the south, south-east and east of the country. Maps 4 and 5 indicate that the south and south-east are the areas with river nitrate concentrations that are too high and these are the areas that have shown the greatest increase in nitrate concentration since 2013.

Table 3: Comparative change in river nitrogen concentrations since 2013

Trend	Number of Sites	% Sites
Average annual increase >0.05 mg/l N	465	35
No trend or static	821	62
Average annual decrease >0.05 mg/l N	40	3
Total	1,326	100.0



Map 4: Mean nitrate concentrations in rivers during 2020



Map 5: Nitrate concentration trends in rivers since 2013

Phosphorus in Rivers

Figure 6 summarises the mean phosphorous concentrations at 1,336⁸ river monitoring sites from the national river monitoring programme in 2020.

In 2020, mean river concentrations were greater than the good status EQS (0.035 mg/l P) at over a quarter (29%) of sites. Map 6 shows that the highest phosphorus concentrations i.e. greater than 0.05 mg/l P, are found in areas that have a high proportion of poorly draining soils e.g. Limerick, Monaghan, the area north west of Dublin and Wexford. The Suir catchment in the south east has elevated nitrogen and phosphorus concentrations in rivers, which may reflect that this catchment has a higher density of derogation farms but has heterogenous soils that have been strongly influenced by the underlying geology i.e. phosphorus losses are observed in the poorly drained upland soils, with nitrogen losses from the more freely draining lowland soils.

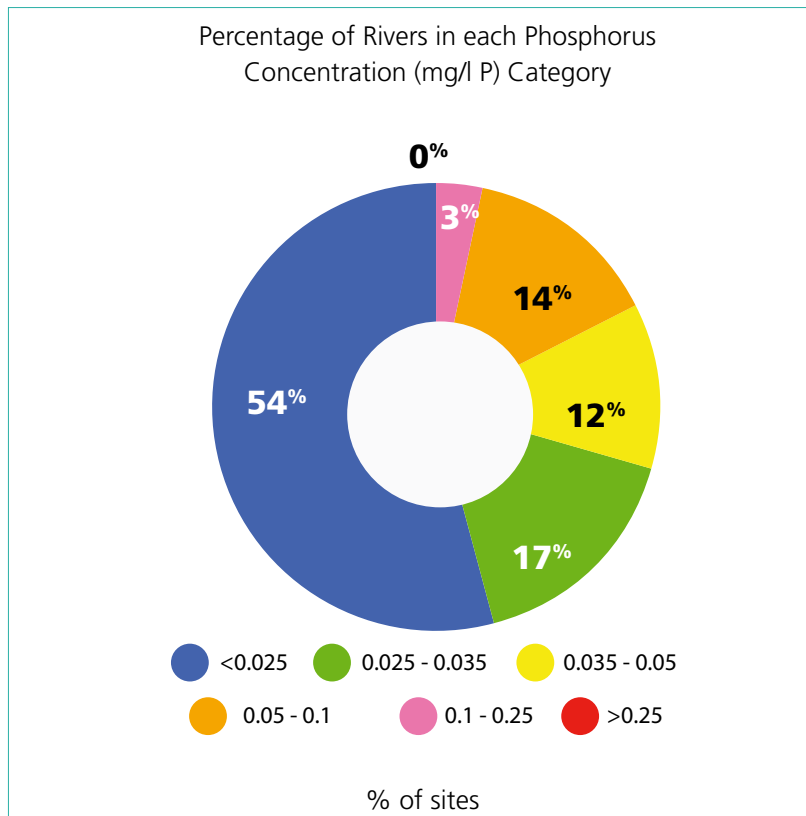


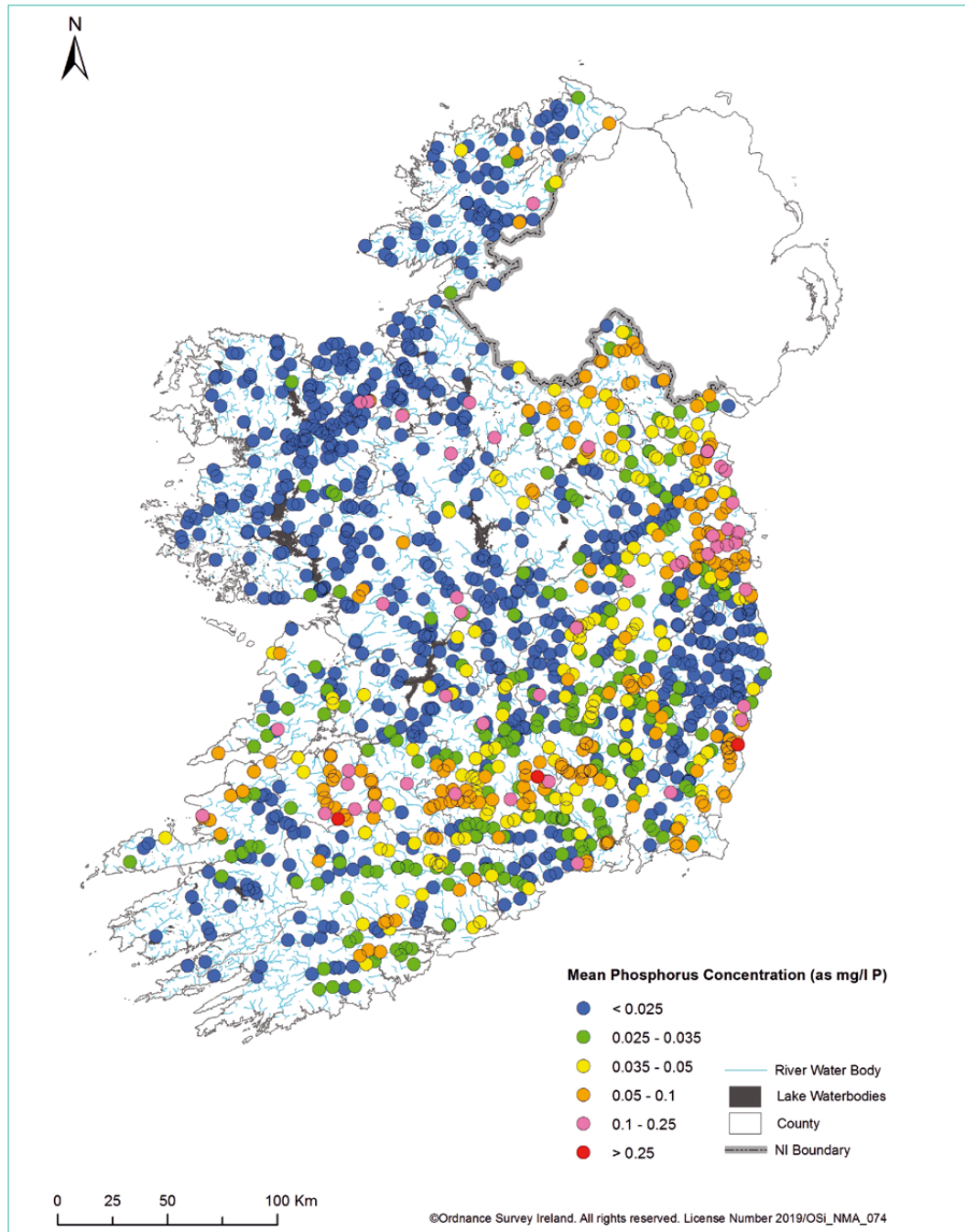
Figure 6: Mean phosphorus concentrations at river monitoring sites in 2020

Table 4 highlights that phosphorus concentrations at individual river sites since have increased by almost 0.015 mg/l P (i.e. an average annual change of 0.002 mg/l P) in the last seven years at 22% of sites. Map 7 indicates that the highest proportion of concentration increases since 2013 have been observed in Limerick, Monaghan, the area north west of Dublin and parts of the south-east i.e. those areas with the highest concentrations.

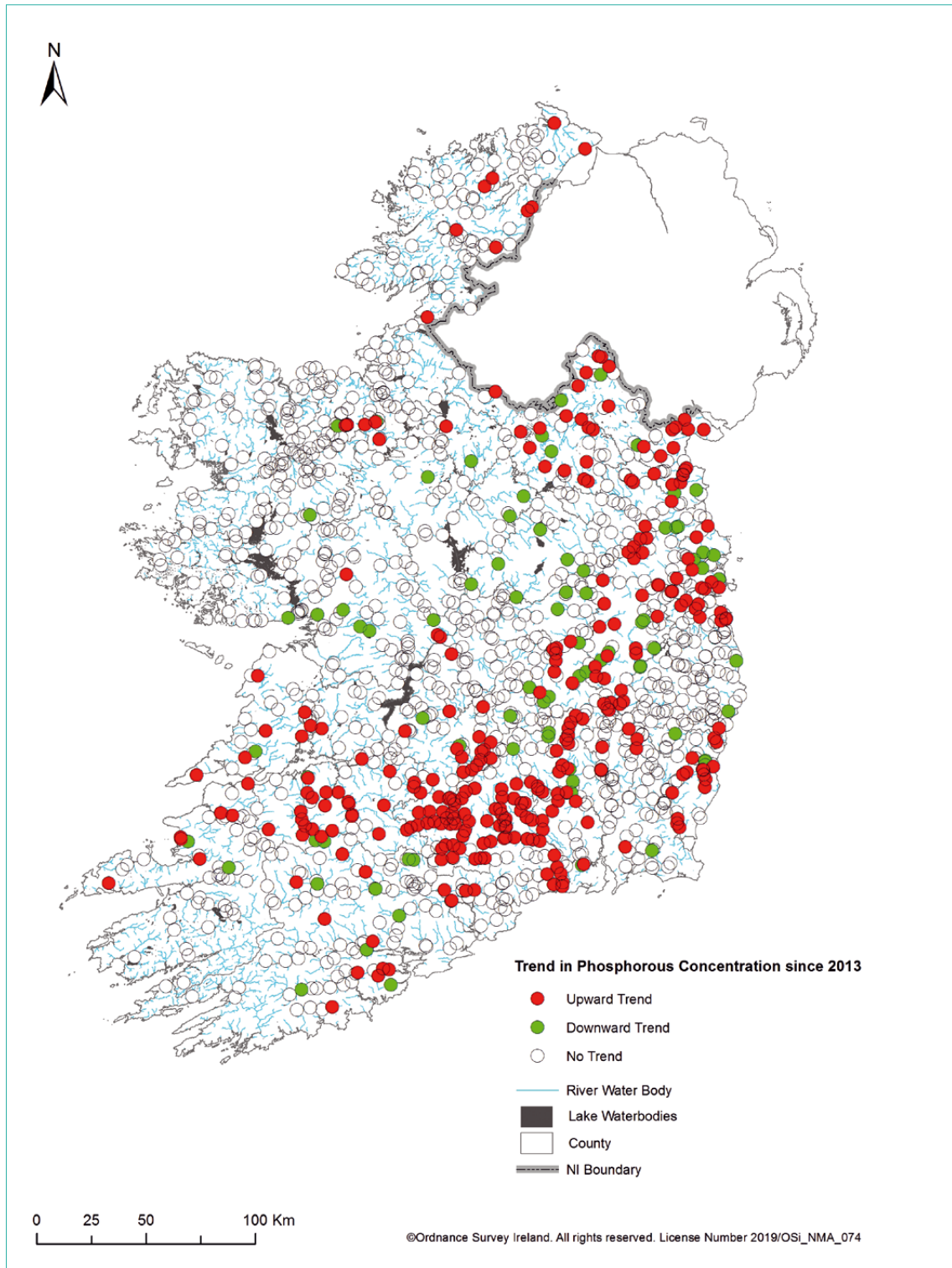
⁸ Only those monitoring sites that have been consistently monitored since 2007 and that have at least four samples each year have been included in the assessment.

Table 4: Comparative change in river phosphorus concentrations since 2013

Trend	Number of Sites	% Sites
Average annual increase >0.002 mg/l P	297	22
No trend or static	956	72
Average annual decrease >0.002 mg/l P	83	6
Total	1,336	100.0



Map 6: Mean phosphorus concentrations in rivers during 2020



Map 7: Phosphorus concentration trends in rivers since 2013

Lakes

Nitrate in Lakes

Figure 7 summarises the mean nitrate concentrations from the national lake monitoring programme during 2020. Data were available for a total of 222 lakes. In summary, mean nitrate concentrations in lakes remain low but increases have been observed in a few lakes in the south and south-east. Nitrate is not thought to be a significant driver of nutrient enrichment in Irish lakes.

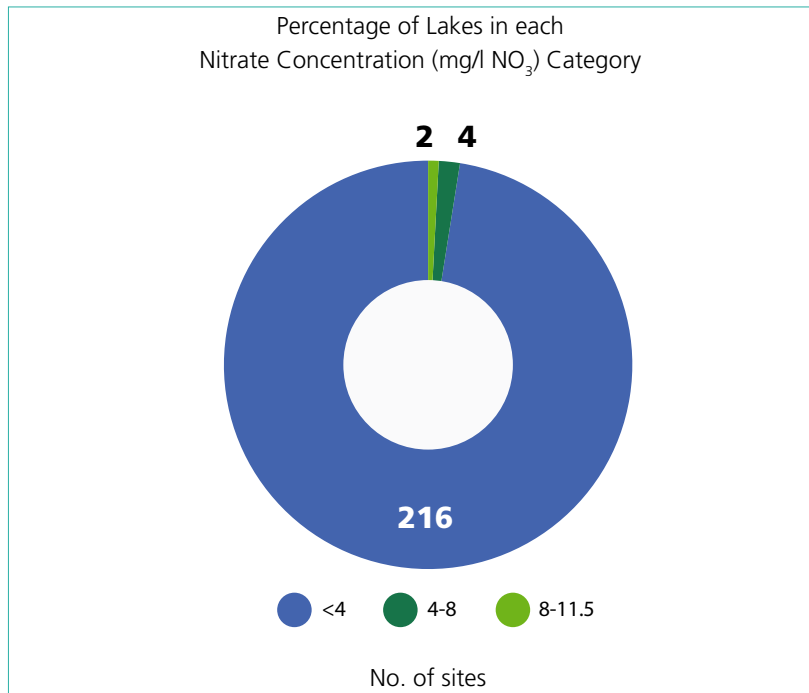
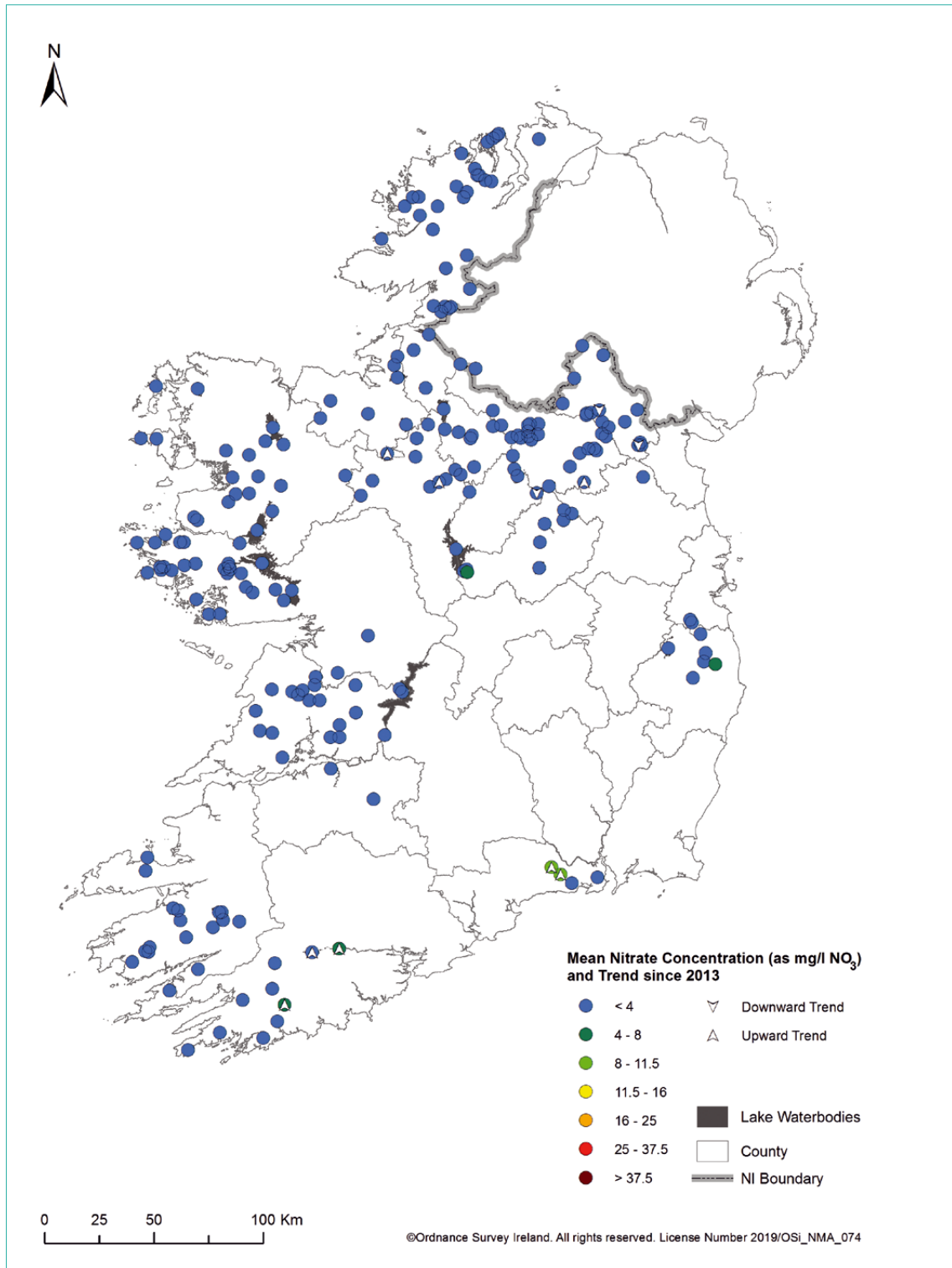


Figure 7: Mean nitrate concentrations in WFD monitored lakes during 2020

Table 5 and Map 8 indicate that lake nitrate concentrations have been relatively stable for most lakes since 2013.

Table 5: Comparative change in lake nitrogen concentrations since 2013

Trend	Number of Sites	% Sites
Average annual increase >0.05 mg/l N	8	3.5
No trend or static	211	95
Average annual decrease >0.05 mg/l N	3	1.5
Total	222	100.0



Map 8: Mean nitrate concentrations in Lakes during 2020 and concentration trends since 2013

Phosphorus in Lakes

Figure 8 summarises the mean total phosphorus concentrations for 223 lakes in the national lake monitoring programme during 2020. In 2020, 29% of lakes had total phosphorus concentrations higher than the good status EQS of 0.025 mg/l P. Map 9 shows that almost all lakes with elevated total phosphorus concentrations are in Monaghan, Cavan or Leitrim. These counties are known to have a high proportion of poorly draining soils.

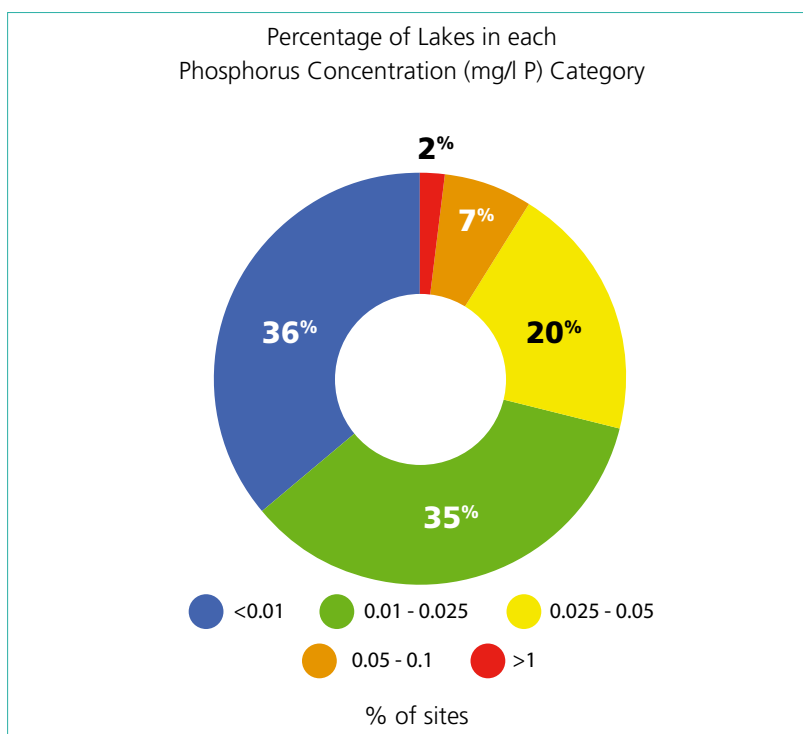
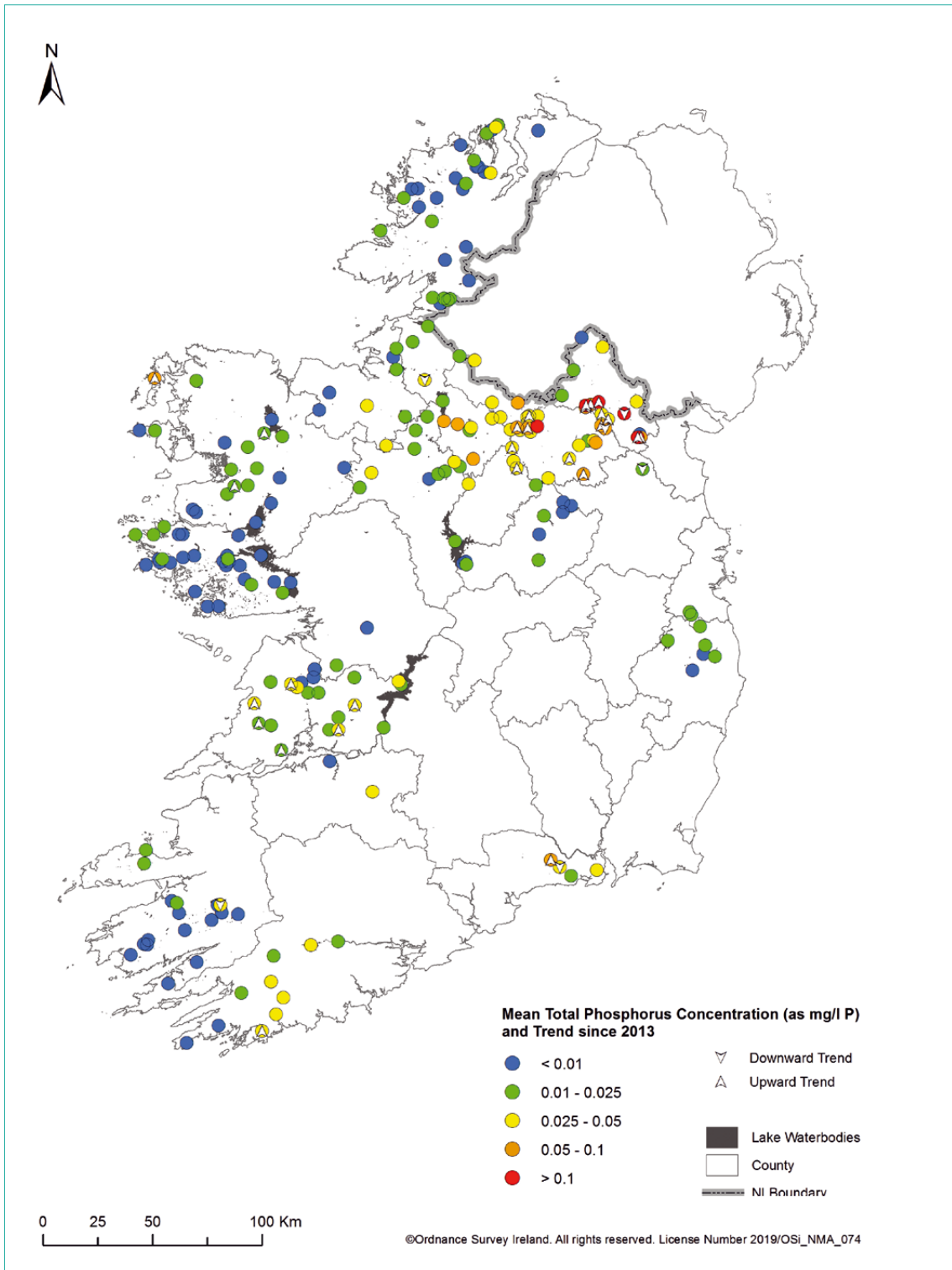


Figure 8: Mean total phosphorus concentrations in WFD monitored lakes during 2020

Table 6 indicates that mean total phosphorus concentrations have been stable for most lakes. Map 9 showing that most of the significant increases since 2013 have occurred in the lakes of Cavan and Monaghan, with increases also noted in County Clare. These are areas that historically have had high phosphorus concentrations in lakes and rivers because and the high proportion of poorly draining soils means that they are highly susceptible to phosphorus losses to surface water.

Table 6: Comparative change in lake total phosphorus concentrations since 2013

Trend	Number of Sites	% Sites
Average annual increase >0.002 mg/l P	27	12
No trend or static	190	85.5
Average annual decrease >0.002 mg/l P	6	2.5
Total	223	100.0



Map 9: Mean total phosphorus concentrations in lakes during 2020 and concentration trends since 2013

Estuarine and Coastal Waters

Nitrate in Estuarine and Coastal Waters

Figure 9 summarises the median winter nitrate concentrations from the national monitoring programme between 2018 and 2020. The median winter nitrate concentration in estuarine and coastal waters is measured as dissolved inorganic nitrogen (DIN) and it is assumed that all measured nitrogen is present as nitrate⁹. The most recent assessment was carried out on 90 transitional and coastal water bodies. Sixteen of the 90 water bodies had nitrogen concentrations that were higher than the environmental quality standard and are in an unsatisfactory condition in relation to nitrogen levels present.

Nationally, there have been gradually reducing winter median nitrate concentrations, but Map 10 shows that there are concentrations of concern in the estuaries in the south east and in County Cork. Higher nitrate concentrations in these areas coincide with, and are a consequence of, the losses of nitrate in the rivers and groundwater in the upstream catchments.

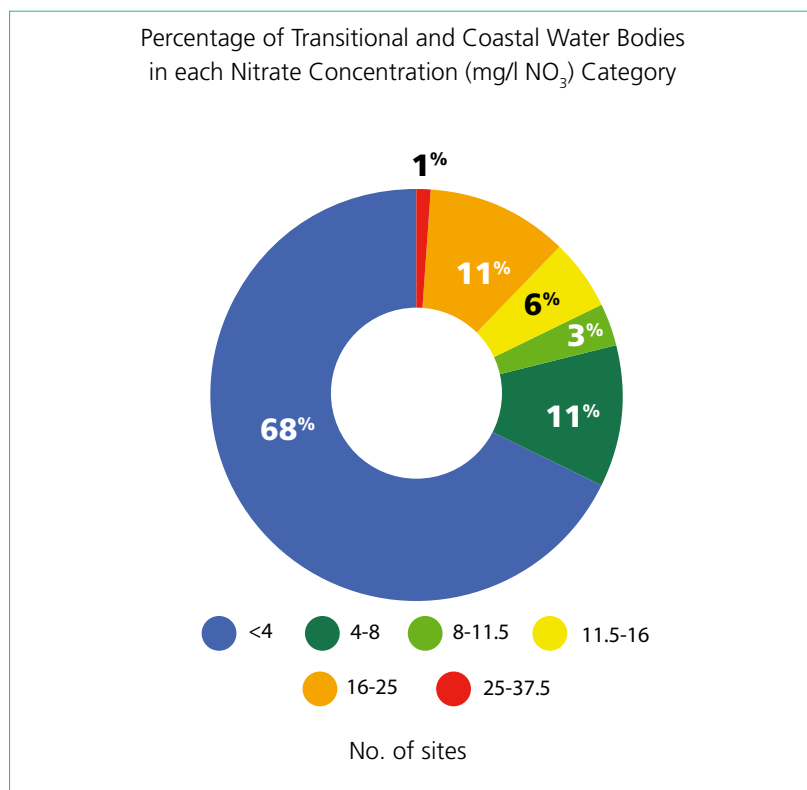


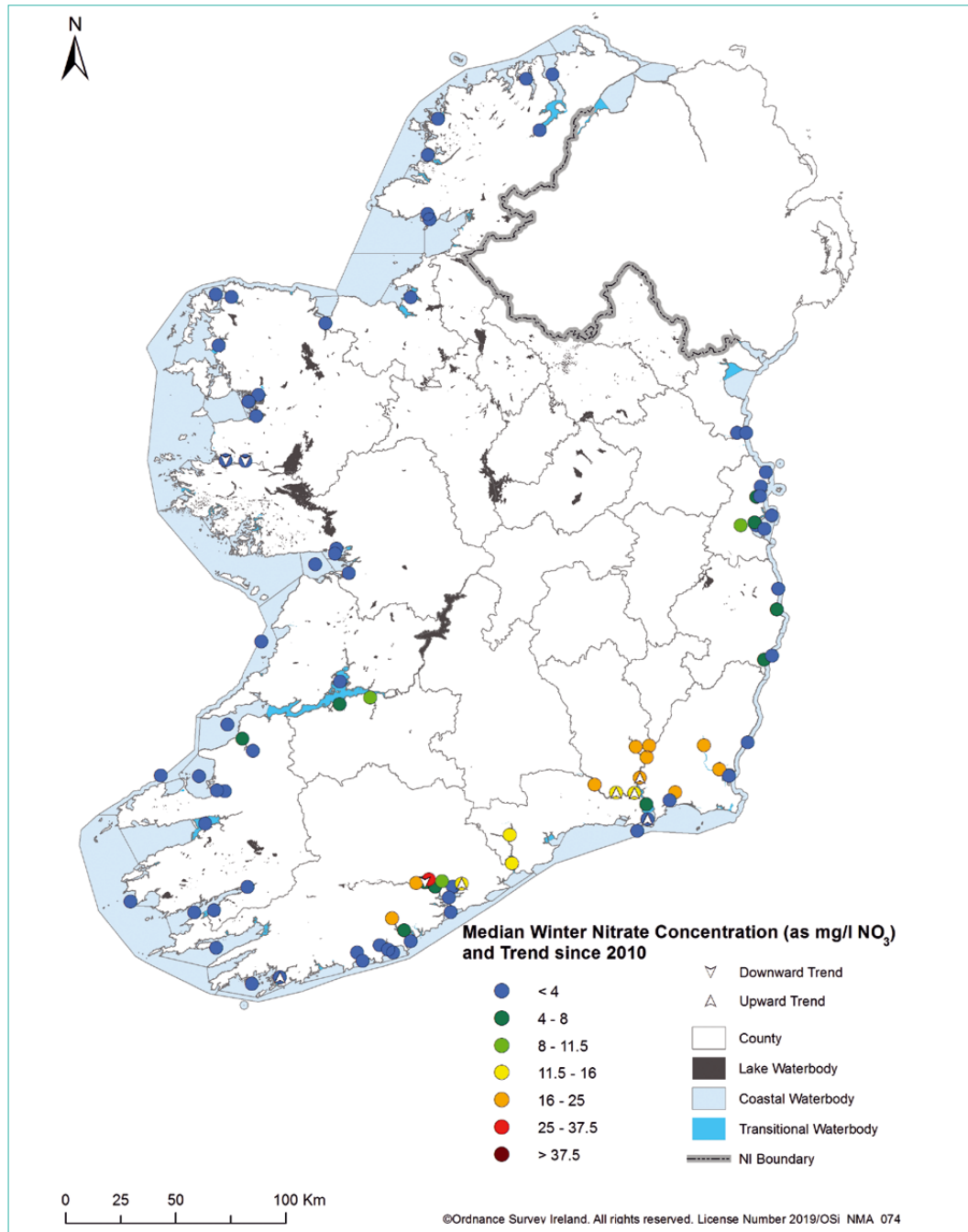
Figure 9: Median winter nitrate concentrations (mg/l NO₃) in estuarine and coastal waters during 2018-2020

Table 7 highlights that six estuarine and coastal waters have seen an increase of more than 1.5 mg/l NO₃ (i.e. an average annual change of 0.05 mg/l N) in the last seven years. Map 10 highlights that regionally the greatest increases in concentration have been in the south-east i.e. the areas with unacceptably high nitrate concentrations already.

⁹ The analysis in this report does not correct for salinity or the natural dilution and mixing properties of saline waters

Table 7: Comparative change in the median winter nitrogen concentrations of estuarine and coastal waters since 2010

Trend	Number of Sites	% Sites
Average annual increase >0.05 mg/l N	6	6.5
No trend or static	81	90
Average annual decrease >0.05 mg/l N	3	3.5
Total	90	100.0



Map 10: Winter median nitrate concentrations in estuarine and coastal waterbodies during 2020 and concentration trends since 2010

Phosphorus in Estuarine and Coastal Waters

Figure 10 summarises the median winter phosphorus (measured as molybdate reactive phosphorus (MRP)) concentrations from 90 estuaries and coastal waters in the national monitoring programme between 2018 and 2020¹⁰.

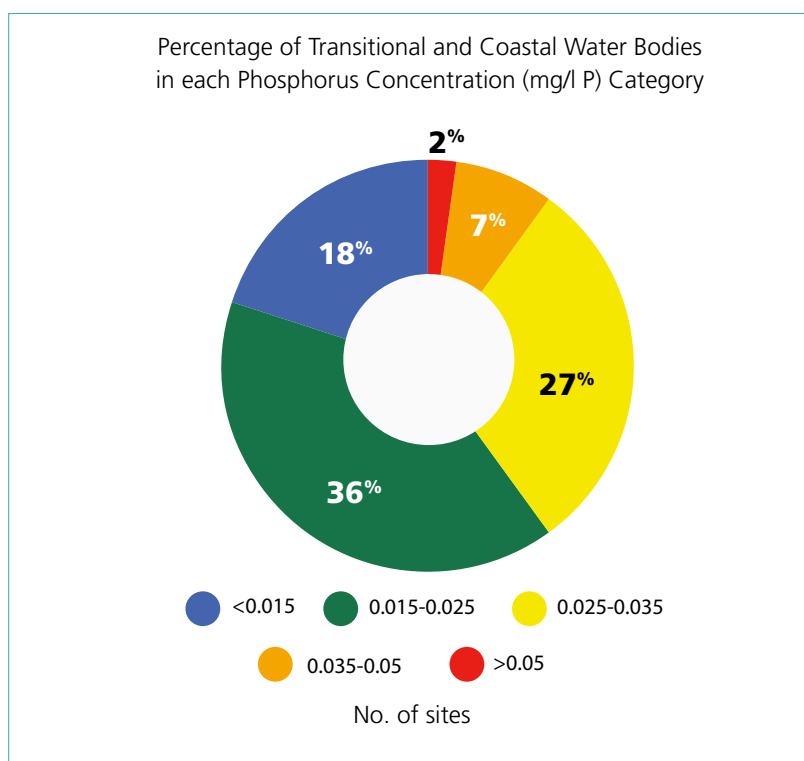


Figure 10: Median winter phosphorus concentrations in estuarine and coastal waters during 2018-2020

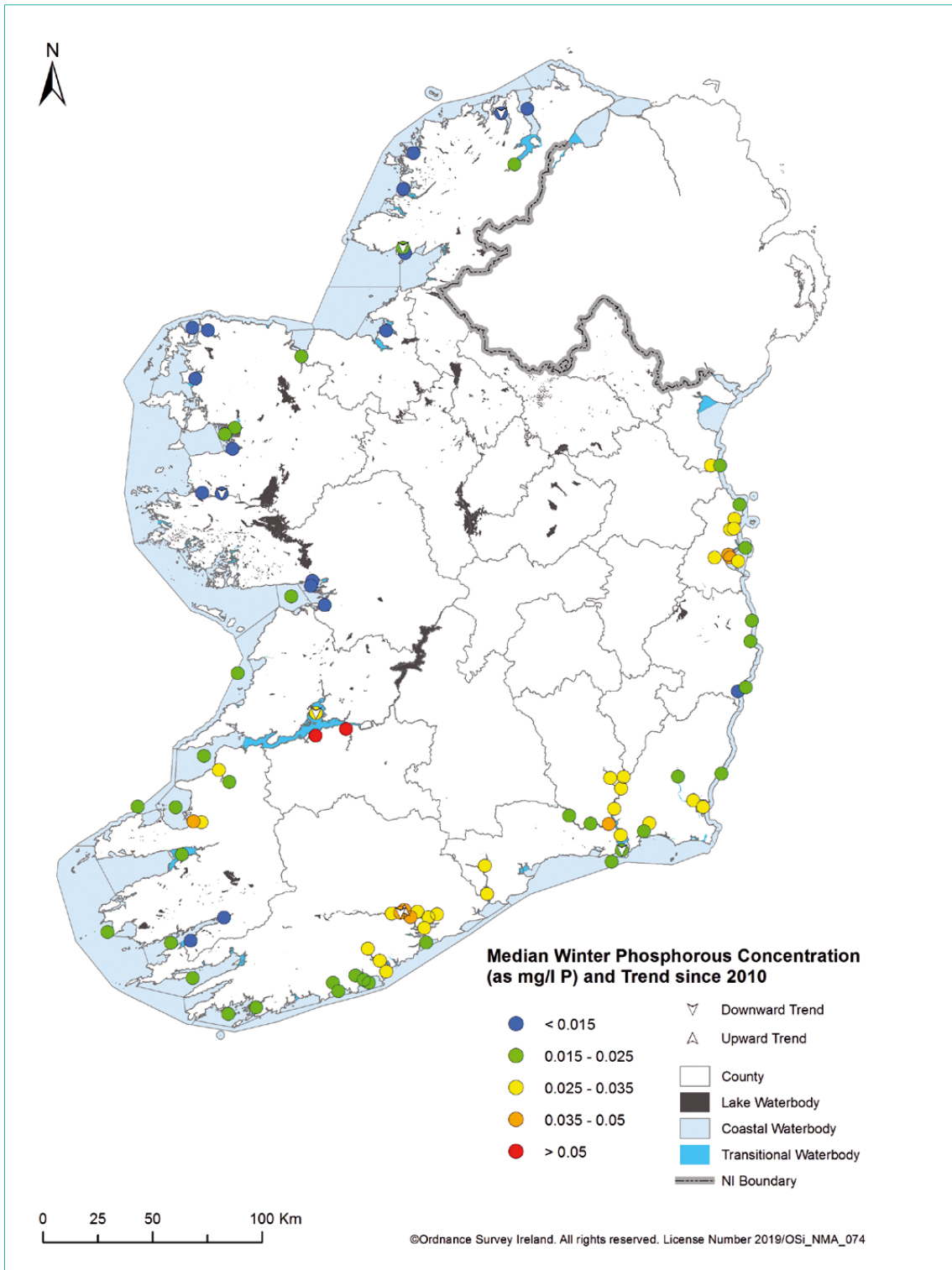
Winter median phosphorus concentrations are elevated in the south east and the southern estuaries and coastal waters, with Map 11 highlighting that there are high concentrations in the estuaries downstream of the major urban centres of Limerick, Waterford, Cork and Dublin.

Table 8 and Map 11 shows that median phosphorus concentrations have been relatively stable since 2010.

Table 8: Comparative change in the median winter phosphorus concentrations of estuarine and coastal waters since 2010

Trend	Number of Sites	% Sites
Average annual increase >0.002 mg/l P	1	1.5
No trend or static	83	92
Average annual decrease >0.002 mg/l P	6	6.5
Total	90	100.0

¹⁰ The analysis in this report does not correct for salinity or the natural dilution and mixing properties of saline waters.



Map 11: Winter median phosphorus concentrations in estuarine and coastal waterbodies during 2020 and concentration trends since 2013

Summary

Nutrient losses from agriculture are one of the significant drivers for waters not meeting their environmental objectives under the WFD. The most recent WFD status assessment (2013-18) indicates that just over half of our rivers and lakes; and only 38% of our estuaries were in satisfactory ecological health and overall water quality was in decline. The main problem damaging our waters is the presence of too much phosphorus and nitrogen.

Phosphorus concentrations are above the good status EQS in over a quarter of rivers and lakes, and these are typically associated with poorly draining soils. Those catchments with a high proportion of poorly draining soils have seen an increase in phosphorus concentrations in rivers and lakes since 2013, with relatively stable phosphorus concentrations elsewhere in the country.

This report finds that nitrogen concentrations remain too high in rivers, groundwater and estuaries in the south, south east and east of Ireland and have been increasing since 2013. Thirty-two percent of rivers have concentrations higher than 11.5 mg/l NO₃, which may be contributing to a breach of the environmental quality standard in the receiving marine waters. Nitrate concentrations in groundwater and surface water in the south east are double the concentrations elsewhere in the country.

Over a third (35%) of all river sites have seen an increase of more than 1.5 mg/l NO₃ in the annual mean concentration and a quarter of groundwater sites are also showing an increase of more than 1.5 mg/l NO₃ since 2013. The greatest increases in nitrate concentration have been in the south east and south, with 10 of the 16 monitored estuaries and coastal waters in this south east having concentrations above the nitrogen standard for marine waters, and a quarter of these waterbodies have had an upward trend of more than 1.5 mg/l NO₃ since 2013.

Overall, to achieve the WFD objectives, mitigation measures need to be targeted to the water quality issues and physical settings where they occur, i.e. the critical source areas within sub-catchments. Within a catchment, the critical source areas for phosphorus and nitrate frequently occur in different locations because they are driven by the hydrological properties of the soils. Therefore, any mitigation measures introduced should be tailored and targeted to the critical source area that is relevant to the pollutant of concern.

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AN GHNÍOMHAIREACTH UM CHAOMHNÚ COMHSHAOL

Tá an GCC freagrach as an gcomhshaol a chosaint agus a fheabhsú, mar shócmhainn luachmhar do mhuintir na hÉireann. Táimid tiomanta do dhaoine agus don chomhshaol a chosaint ar thionchar díobhálach na radaíochta agus an truaillithe.

Is féidir obair na Gníomhaireachta a roinnt ina trí phríomhréimse:

Rialáil: Rialáil agus córais chomhlíonta comhshaoil éifeachtacha a chur i bhfeidhm, chun dea-thorthaí comhshaoil a bhaint amach agus díriú orthu siúd nach mbíonn ag cloí leo.

Eolas: Sonraí, eolas agus measúnú ardchaighdeán, spríochdhírthe agus tráthúil a chur ar fáil i leith an chomhshaoil chun bonn eolais a chur faoin gcinnteoireacht.

Abhcióideacht: Ag obair le daoine eile ar son timpeallachta glaine, táirgiúla agus dea-chosanta agus ar son cleachtas inbhuanaithe i dtaobh an chomhshaoil.

I measc ár gcuid freagrachtaí tá:

Ceadúnú

- Gníomhaíochtaí tionscail, dramhaíola agus stórála peitрил ar scála mór;
- Sceitheadh fuíolluisce uirbhig;
- Úsáid shrianta agus scaoileadh rialaithe Orgánach Géinmhodhnaithe;
- Foinsí radaíochta ianúcháin;
- Astaíochtaí gás ceaptha teasa ó thionscal agus ón eitlíocht trí Scéim an AE um Thrádáil Astaíochtaí.

Forfheidhmiú Náisiúnta i leith Cúrsaí Comhshaoil

- Iníúchadh agus cigireacht ar shaoráidí a bhfuil ceadúnas acu ón GCC;
- Cur i bhfeidhm an dea-chleachtas a stiúradh i ngníomhaíochtaí agus i saoráidí rialáilte;
- Maoirseacht a dhéanamh ar fhreagrachtaí an údarais áitiúil as cosaint an chomhshaoil;
- Caighdeán an uisce óil phoiblí a rialáil agus údaruithe um sceitheadh fuíolluisce uirbhig a fhorfheidhmiú
- Caighdeán an uisce óil phoiblí agus phríobháidigh a mheasúnú agus tuairisciú air;
- Comhordú a dhéanamh ar líonra d'eagraíochtaí seirbhíse poiblí chun tacú le gníomhú i gcoinne coireachta comhshaoil;
- An dlí a chur orthu siúd a bhriseann dlí an chomhshaoil agus a dhéanann dochar don chomhshaol.

Bainistíocht Dramhaíola agus Ceimiceáin sa Chomhshaol

- Rialacháin dramhaíola a chur i bhfeidhm agus a fhorfheidhmiú lena n-áirítear saincheisteanna forfheidhmithe náisiúnta;
- Staitisticí dramhaíola náisiúnta a ullmhú agus a fhoilsiú chomh maith leis an bPlean Náisiúnta um Bainistíocht

Dramhaíola Guaisí;

- An Clár Náisiúnta um Chosc Dramhaíola a fhorbairt agus a chur i bhfeidhm;
- Reachtaíocht ar rialú ceimiceán sa timpeallacht a chur i bhfeidhm agus tuairisciú ar an reachtaíocht sin.

Bainistíocht Uisce

- Plé le struchtúir náisiúnta agus réigiúnacha rialachais agus oibriúcháin chun an Chreat-treoir Uisce a chur i bhfeidhm;
- Monatóireacht, measúnú agus tuairisciú a dhéanamh ar chaighdeán aibhneacha, lochanna, uisce idirchreasa agus cósta, uisce snámha agus screamhuisce chomh maith le tomhas ar leibhéil uisce agus sreabhadh abhann.

Eolaíocht Aeráide & Athrú Aeráide

- Fardail agus réamh-mheastacháin a fhoilsiú um astaíochtaí gás ceaptha teasa na hÉireann;
- Rúnaíocht a chur ar fáil don Chomhairle Chomhairleach ar Athrú Aeráide agus tacaíocht a thabhairt don Idirphlé Náisiúnta ar Gníomhú ar son na hAeráide;
- Tacú le gníomhaíochtaí forbartha Náisiúnta, AE agus NA um Eolaíocht agus Beartas Aeráide.

Monatóireacht & Measúnú ar an gComhshaol

- Córais náisiúnta um monatóireacht an chomhshaoil a cheapadh agus a chur i bhfeidhm: teicneolaíocht, bainistíocht sonraí, anailís agus réamhaisnéisiú;
- Tuairiscí ar Staid Timpeallacht na hÉireann agus ar Tháscairí a chur ar fáil;
- Monatóireacht a dhéanamh ar chaighdeán an aeir agus Treoir an AE i leith Aeir Ghlain don Eoraip a chur i bhfeidhm chomh maith leis an gCoinbhinsiún ar Aerthruaillí Fadraoin Trasteorann, agus an Treoir i leith na Teorann Náisiúnta Astaíochtaí;
- Maoirseacht a dhéanamh ar chur i bhfeidhm na Treorach i leith Torainn Timpeallachta;
- Measúnú a dhéanamh ar thionchar pleananna agus clár beartaithe ar chomhshaol na hÉireann.
- Taighde agus Forbairt Comhshaoil
- Comhordú a dhéanamh ar ghníomhaíochtaí taighde comhshaoil agus iad a mhaoiniú chun brú a aithint, bonn eolais a chur faoin mbeartas agus réitigh a chur ar fáil;
- Comhoibriú le gníomhaíocht náisiúnta agus AE um thaighde comhshaoil.

Cosaint Raideolaíoch

- Monatóireacht a dhéanamh ar leibhéil radaíochta agus nochtadh an phobail do radaíocht ianúcháin agus do réimsí leictreamaighnéadacha a mheas;
- Cabhrú le pleananna náisiúnta a fhorbairt le haghaidh éigeandálaí ag eascairt as taismí núicléacha;

- Monatóireacht a dhéanamh ar fhorbairtí thar lear a bhaineann le saoráidí núicléacha agus leis an tsábháilteacht raideolaíochta;
- Sainseirbhísí um chosaint ar an radaíocht a sholáthar, nó maoirsiú a dhéanamh ar sholáthar na seirbhísí sin.

Treoir, Ardú Feasachta agus Faisnéis Inrochtana

- Tuairisciú, comhairle agus treoir neamhspleách, fianaise-bhunaithe a chur ar fáil don Rialtas, don tionscal agus don phobal ar ábhair maidir le cosaint comhshaoil agus raideolaíoch;
- An nasc idir sláinte agus folláine, an geilleagar agus timpeallacht ghlan a chur chun cinn;
- Feasacht comhshaoil a chur chun cinn lena n-áirítear tacú le hiompraíocht um éifeachtúlacht acmhainní agus aistriú aeráide;
- Tástáil radóin a chur chun cinn i dtithe agus in ionaid oibre agus feabhsúchán a mholadh áit is gá.

Comhpháirtíocht agus Líonrú

- Oibriú le gníomhaireachtaí idirnáisiúnta agus náisiúnta, údarais réigiúnacha agus áitiúla, eagraíochtaí neamhrialtais, comhlachtaí ionadaíochta agus ranna rialtais chun cosaint comhshaoil agus raideolaíoch a chur ar fáil, chomh maith le taighde, comhordú agus cinnteoireacht bunaithe ar an eolaíocht.

Bainistíocht agus struchtúr na Gníomhaireachta um Chaomhnú Comhshaoil

Tá an GCC á bhainistiú ag Bord Lánaimeartha, ar a bhfuil Ard-Stiúrthóir agus cúigear Stiúrthóir. Déantar an obair ar fud cúig cinn d'Oifigí:

- An Oifig um Inbhuanaitheacht i leith Cúrsaí Comhshaoil
- An Oifig Forfheidhmithe i leith Cúrsaí Comhshaoil
- An Oifig um Fhianaise agus Measúnú
- An Oifig um Chosaint ar Radaíocht agus Monatóireacht Comhshaoil
- An Oifig Cumarsáide agus Seirbhísí Corparáideacha

Tugann coistí comhairleacha cabhair don Gníomhaireacht agus tagann siad le chéile go rialta le plé a dhéanamh ar ábhair inmí agus le comhairle a chur ar an mBord.



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