ZERO WASTE ALLIANCE IRELAND

Towards Sustainable Resource Management

Submission by Zero Waste Alliance Ireland to the Department of Housing, Local Government and Heritage on the Draft Sixth Nitrates Action Programme (NAP)

1 December 2025

Zero Waste Alliance Ireland is funded by the Department of Climate, Energy and the Environment through the Irish Environmental Network, and is a member of

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01 December 2025

Nitrates Consultation
Water Advisory Unit
Department of Housing, Local Government and Heritage
Custom House,
Dublin 1
D01 W6X0.

By email to **WAUConsultation@housing.gov.ie**

Dear Sir / Madam,

Submission by Zero Waste Alliance Ireland to the Department of Housing, Local Government and Heritage on the Draft Sixth Nitrates Action Programme (NAP)

In response to the invitation by the Department of Housing, Local Government and Heritage to make submissions, observations and comments on **Ireland's Draft Sixth Nitrates Action Programme (NAP)**, we are attaching a submission prepared by Zero Waste Alliance Ireland (ZWAI).

ZWAI welcomes this opportunity to engage in the consultation process and to contribute to shaping Ireland's Sixth Nitrates Action Programme (NAP). We consider that, despite ongoing programmes and investments, recent assessments still show water quality deterioration in many catchments across Ireland. It is well known that agriculture remains one of the main pressures on water quality, and therefore, effective and meaningful measures must be implemented to significantly reduce this pressure if we are to reverse the

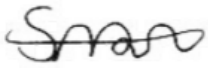
downward trend. Our submission highlights past and current issues with Ireland's NAP and offers recommendations for improvements that we regard as important and meaningful.

Our core mission is to prevent and eliminate waste in all forms, and we view the leaching of nutrients into water as a type of waste that pollutes the natural environment by causing excessive eutrophication. The sixth NAP's stated purpose, which we hope will be realised, is to tackle the urgent combined challenges of declining water quality, maintenance of soil quality, land and water use, excessive use of organic and synthetic fertilisers, Ireland's dependence on meat-based and dairy-based livestock farming, the adverse impacts of Irish agriculture on the country's ability to comply with legally necessary greenhouse gas reductions, and to address the relationships between Ireland's agricultural production, diet and human health.

We therefore see this public consultation as an important and timely initiative, and we are pleased to share our insights and recommendations in response to the draft Sixth NAP.

We look forward to receiving your acknowledgement of this submission and to continued engagement with the Department on the development and implementation of Ireland's Sixth NAP.

Yours sincerely,



Sara Guigui

Director,

Zero Waste Alliance Ireland

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CONTENTS

Contd.

Contents, Cont'd.

Contd.

Contents, Cont'd.

FIGURES

APPENDICES

ZERO WASTE ALLIANCE IRELAND

Towards Sustainable Resource Management

Submission by Zero Waste Alliance Ireland to the Department of Housing, Local Government and Heritage on the Draft Sixth Nitrates Action Programme (NAP)

1. INTRODUCTION

1.1 Background to the Public Consultation

On 28 October 2025, the Department of Housing, Local Government and Heritage launched an open public consultation on the draft **Sixth Nitrates Action Programme** (NAP), inviting submissions, observations and comments on the programme, prepared in close collaboration with the Department of Agriculture, Food and the Marine (DAFM).

Ireland's NAP is designed to implement in Ireland the mandatory requirements of the European Union Nitrates Directive,[1] and is considered by both Departments to be a critical element of national legislation to protect surface waters and groundwater from pollution caused by agriculture, or from agricultural sources and activities. This Directive requires Member States to develop a NAP every four years, and is given effect in Ireland by the European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2022 (S.I. No. 113 of 2022), as amended.

Ireland's first Nitrates Action Programme (NAP, 2006 - 2010) came into operation in 2006; the second NAP was in place during the years 2010 to 2013, the third NAP lasted from 2014 to 2017, the fourth NAP ran from 2018 to 2021, and the current Fifth NAP runs from the year 2022, through to 2025.[2] The proposed changes are the result of a review of the current programme, which commenced

[1] Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources.

[2] Zero Waste Alliance Ireland commented in detail on some of these earlier NAPs.

in 2023, was continued in 2024, and which recommended further actions required to deliver necessary improvements in water quality. The review was undertaken by the DAFM's Agriculture Water Quality Working Group, following recommendations from the Nitrates Expert Group, and both of these groups' recommendations for additional actions were agreed by the relevant Ministers.

Parallel public consultations are being undertaken for the associated Strategic Environmental Assessment Report and the Natura Impact Statement on the draft Sixth Nitrates Action Programme.

1.2 The Requirements of the EU Nitrates Directive and the Problems of Derogation

The draft 6th NAP, available on the Department's consultation website, is a 94-page document which describes in detail the environmental requirements of the Nitrates Directive and how these are to be implemented and addressed.

The EU Nitrates Directive sets a limit of 170 kg of manure nitrogen per hectare (kg N/ha), but Annex III of the Directive permits Member States to set a higher rate, based on a number of criteria and subject to approval by the European Commission and Member States, with the maximum rate approved by the Commission of 250 kg manure N/ha. This is commonly known as the **Nitrates Derogation**.[3] Ireland sought and was permitted this derogation in all five previous programmes and is seeking to renew the derogation under the Sixth NAP.

On 27 November, the Minister for Agriculture, Food and the Marine stated that –

> "*Following extensive engagement with the European Commissioner for the Environment, Jessika Roswall, including her recent visit to Ireland, I can confirm that the European Commission has proposed a legal text providing for a three-year extension to Ireland's nitrates derogation, subject to certain conditionality. Approval will now be subject to securing the required approval of Member States at the EU Nitrates Committee on 9 December.*
>
> *Requirements include the need for Ireland to conduct environmental assessments at catchment level to demonstrate compliance with the Habitats Directive. This is a massive undertaking – it will require a significant investment of time and resources to complete these*

[3] Commission Implementing Decision (EU) 2022/696 of 29 April 2022 granting a derogation requested by Ireland pursuant to Council Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources (notified under document C(2022) 2596).

> *assessments. The Commission has agreed to a three-year derogation to facilitate completion of this work".*[4]

In June this year, the European Commission expressed concern about Ireland's compliance with the Habitats Directive, and the Commission asked for robust assurances that Ireland would demonstrate full compliance with the assessment requirements of the Habitats Directive.

In response to these concerns, the Minister for Agriculture, Food and the Marine stated on 27 November 2025 that –

> "*Ireland has a very sustainable, outdoor, grass-based production system in milk and meat products and satisfies all of the conditions as set out in the directive to justify a nitrates derogation".*[5]

The Minister's strong advocacy for extending Ireland's derogation from the Nitrates Directive was supported by Ireland's EU Commissioner, Mr Michael McGrath, who is reported as stating that –

> "*In the European Commission, we recognise the vital importance of this issue for Irish agriculture".*[6]

Full details of the proposal will be published when it is put to a vote by the EU nitrates committee, made up of members of all 27 member states, in the next few weeks.

As the Department will be aware, the Nitrates Derogation is one of the most environmentally contentious measures in Ireland's agricultural policy and practice. The derogation allows farmers to exceed the permitted limit of 170 kg of livestock manure nitrogen per hectare as mandated in the Nitrates Regulations, up to a maximum of 220 kg or 250 kg per hectare, subject to adherence to stricter rules. Only three Member States of the EU were granted nitrates derogations – Ireland, Denmark and the Netherlands. Ireland's derogation expires at the end of 2025. In April 2024, Denmark announced that it would not seek a renewal of its derogation; and it is likely that Ireland will remain the only EU Member State which is allowed to spread animal slurry on farmland at a rate which exceeds that permitted under the EU Nitrates Directive.

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[4] https://www.gov.ie/en/department-of-agriculture-food-and-the-marine/press-releases/minister-heydon-outlines-progress-on-irelands-nitrates-derogation-request/#:~:text=Following%20extensive%20engagement%20with%20the,derogation%2C%20subject%20to%20certain%20conditionality.

[5] https://www.gov.ie/en/department-of-agriculture-food-and-the-marine/press-releases/minister-heydon-outlines-progress-on-irelands-nitrates-derogation-request/#:~:text=Following%20extensive%20engagement%20with%20the,derogation%2C%20subject%20to%20certain%20conditionality.

[6] https://www.rte.ie/news/ireland/2025/1127/1546115-mcgrath-nitrates-ireland/

When Ireland was granted a derogation in April 2022, the European Commission inserted a condition that an interim water quality review must be carried out in 2023; and, that in areas where the relevant water quality criteria, as determined by the Commission, had not been achieved, then additional measures must be put in place by January 2024.

Four pollution criteria are included in the derogation decision, two of which are based on the nitrate concentrations in water, and two on eutrophication. The eutrophication assessment is based on the nutrient status of the water, i.e., on nitrate and phosphate levels, and on biological indicators (plants and macro-invertebrates). Monitoring is undertaken by the EPA, as Regulation 37 of the European Union (Good Agricultural Practices for the Protection of Waters) (Amendment) Regulations (S.I. 393 of 2022) requires the EPA to prepare an annual report of the results of water quality monitoring to support the assessment of the impact of the nitrates derogation, as required by the Commission Implementing Decision (EU) 2022/696.

Following an interim review and a two-year water quality review, and in line with scientific evidence provided by the EPA, a reduction to 220 kgN/ha was applied to most of the 7,000 farms currently "in derogation". This change was the result of the EPA's evidence which showed a continuing overall decline in the condition of Ireland's rivers and lakes, with agriculture the main source of pressure. Another factor which we consider must be taken into account is the judgement of the European Court of Justice on 20 November 2025 which found Ireland guilty of multiple serious breaches of its obligations under the EU Water Framework Directive, including failure to prevent water pollution, failure to provide adequate controls on water abstraction, and a failure to put in place a regulatory framework to prevent physical damage to Irish rivers and streams.[7] This is an important Judgment, to which we will refer further in **section 3.1.1** below.

It is relevant to note that An Taisce's Head of Advocacy, Dr Elaine McGoff, when speaking recently in Dublin with the EU Environment Commissioner, Jessika Roswall, described the on-going impacts of the current nitrates derogation on Irish water quality:

> "*We asked the Commissioner to further reduce the upper limit of nitrogen which can be spread, and to ultimately move towards removing the derogation entirely, unless Ireland can prove that it will not impact on water quality. To date,* ***Ireland has utterly failed to provide any evidence that the extra stocking density allowed for under the derogation is not driving water pollution, or to even assess that adequately*** [our emphasis]. *Catchment is the new community, we depend on each other*

[7] Judgment of the CJEU (Ninth Chamber) of 20 November 2025; Case C-204/24, European Commission -v- Ireland. Failure of a Member State to fulfil obligations – Environment – Directive 2000/60/EC – Community action in the field of water policy – Failure to transpose fully and correctly.

to protect it, and farmers play an absolutely key role in this. We're calling on the Commissioner to champion the science and the law in her decision on Ireland's next derogation".[8]

It is therefore our submission that there remains serious doubt about Ireland's willingness or ability to comply with the Nitrates Directive, given the strong advocacy by agricultural interests to continue extending Ireland's derogation from the Directive, the robust support by Government Ministers, and the restatements by Ministers that derogation is essential for Irish agriculture. The Judgment of the CJEU in case C-204/24 (cited above) cannot be disregarded; and, even though the Minister for Agriculture, Food and the Marine has agreed that demonstrating compliance with the Habitats Directive will be "*a massive undertaking, requiring a significant investment of time and resources"* to conduct environmental assessments, there is no indication in the current budget that these resources will become available.

The proposed draft Sixth Nitrates Action Programme, which we examine in greater detail in **section 3** below, does not appear to provide the necessary changes in agricultural policy, strengthening of water pollution controls, and better monitoring and enforcement (**section 1.4** below).

1.3 Policies and Programmes with which the Proposed Draft Sixth Nitrates Action Programme 2026-2029 must be Compliant

In addition to the Nitrates Directive, Ireland's Nitrates Action Programmes must also comply with the Water Framework Directive (WFD), adopted by Member States in the year 2000, and transposed into law in Ireland through the European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003), as amended. The WFD sets out to achieve an integrated and harmonised approach to water policy, water protection and aquatic ecosystem management across all EU Member States, making it one of the most important and wide-ranging directives.

The Department's consultation document states clearly that the draft Sixth Nitrates Action Programme has been developed in the context of many other Government and EU policies, and these are briefly described in the Department's consultation document (**section 3.2.1** below). If this statement represents the Department's policy, and therefore Government policy, we have to consider the extent to which the proposed Sixth Nitrates Action Programme complies with all of these policies, and there are many of them, listed in the Department's consultation document, and including:

[8] An Taisce Newsletter, November 2025.

1. Ireland's "*Programme for Government 2025"*, which contains a stated commitment by the Government to do "*everything within its power to make the case at EU level to secure the retention of the Nitrates Derogation given our unique grass-based production model"*;

2. A programme entitled "*Water and Agriculture – A collaborative approach",* published in 2024 by the Minister for Agriculture, Food and the Marine, and which sets out the Government's position to work towards retaining Ireland's nitrates derogation;

3. The "*Food Vision Strategy",* a ten-year strategy for the Irish agri-food sector, published in 2022, proposing that Ireland will become a world leader in sustainable food systems over the next decade;

4. Ireland's "*Rural Development Policy – Our Rural Future 2021 – 2025"*, which sets out a vision for a thriving rural Ireland;

5. Ireland's "*National Biodiversity Action Plan 2023 – 2030"* and the "*EU Biodiversity Strategy* 2030,[9] both of which are described as aiming to deliver the transformative changes required to value and protect nature;

6. The "*National Adaptation Framework",* which describes a strategy to reduce Ireland's vulnerability to climate change, and to "*build resilience to the effects of climate change and weather related events in the agriculture, forest and seafood sectors"*;

7. The "*Clean Air Strategy for Ireland",* which refers to the fact that an increase in cattle numbers following the removal of milk quotas in 2015, led to Ireland becoming non-compliant with the ammonia emissions reduction target of the National Emissions reduction Commitments Directive (2016/2284/EU) (NECD) in 2020 and 2021;

8. The "*Code of Good Agricultural Practice for Reducing Ammonia Emissions from Agriculture"* (also commonly referred to as the "GAP"), which describes methods by which farmers can reduce emissions of ammonia and greenhouse gases;

9. The "*Agricultural Catchments Programme"* (ACP), funded by DAFM, operated by Teagasc, and established in 2008;

[9] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions — EU Biodiversity Strategy for 2030: Bringing nature back into our lives. COM(2020) 380 final; Brussels, 20.5.2020.

10. The "*Water Action Plan 2024"* (Ireland's 3rd River Basin Management Plan), the purpose of which is to address declining water quality and to protect waters where progress has been made and water quality has been improved; and this Plan includes the "*Local Authority Waters Programme"* (LAWPRO), the "*Agricultural Sustainability Support and Advisory Programme"* (ASSAP), the "*Agriculture Sectoral Action Work Plan"* (SAWP), and other related work plans;

11. The "*Farming for Water European Innovation Partnership",* an initiative under the European Innovation Partnership for Agricultural Productivity and Sustainability (EIP-AGRI);

12. The "*Waters of LIFE Project",* an EU LIFE Integrated Project (IP), with the objective of reversing the decline in Ireland's most pristine (or High Status Objective) water bodies;

13. The EU "*Common Agricultural Policy"* (CAP) 2023-2027,[10] is a major over-arching policy, which has a strong emphasis on the achievement of a higher level of climate and environmental ambition, and contains measures that aim to improve biodiversity and water quality, as well as contributing to national and EU climate and environmental targets; after 2027, the Member States' Strategic Plans developed under the CAP will be integrated with National and Regional Partnership (NRP) Plans; A reformed CAP is considered by the EU to be compatible with the European Green Deal's aims,[11] though we remain sceptical about the extent of this compatibility.

14. The "*Agri-Climate Rural Environment Scheme"* (ACRES), the "*Targeted Agricultural Modernisation Scheme"* (TAMS) and the "*Farming for Water Scheme"*, all of which are national funding schemes, providing grants for measures to protect or improve water quality and to preventor reduce nutrient and sediment losses to water;

15. The European Commission's "*Vision for Agriculture and Food",* published in February 2025, which outlines a long-term strategy to guide the future of the EU's agri-food system to 2040, with the aim

[10] https://agriculture.ec.europa.eu/common-agricultural-policy/cap-overview/cap-2023-27_en#documents.

[11] https://agriculture.ec.europa.eu/news/cap-reforms-compatibility-green-deals-ambition-2020-05-20_en and the Strategic Dialogue on the Future of Agriculture (launched Sept 2023): https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/agriculture-and-green-deal/strategic-dialogue-future-eu-agriculture_en

of seeking to balance economic viability, environmental sustainability, social fairness and innovation;

16. The EU 2025 "*Water Resilience Strategy"* aims to ensure that all Europeans have access to sufficient and good quality water, and to guarantee the good status of all water bodies across the continent;

17. The EU "*Farm to Fork Strategy",*[12] is a central component of the "*European Green Deal"*, aiming to create a fair, healthy, and environmentally sustainable food system, through addressing climate change, biodiversity loss and human health;

18. The UN "*Sustainable Development Goals"* (SDGs), to which Ireland is a signatory, as part of our commitment to the United Nations 2023 Agenda for Sustainable Development, which was adopted by all UN member states (relevant goals include SDG 6, and SDG 14); and,

19. The OECD "*Principles on Water Governance",* which were adopted in 2015 and establish a framework of 12 principles, to which the draft Sixth NAP should be aligned (the consultation document describes how this alignment is to be achieved).

It should be obvious that there is very little coherence between these policies, some of which strongly support the retention of the Nitrates Derogation (numbers 1 and 2 above), while others include national commitments to protect the natural environment and to ensure that water quality and air quality are not detrimentally affected by agricultural activities (numbers 5, 7, 8, 10, 11, 12, 18 and 19).

It is our submission that this lack of coherence is almost bound to ensure an inadequate implementation of the Nitrates Directive, leading to sub-optimal benefits (or very little benefit) to agriculture, biodiversity, water quality, air quality, healthy soils, and a healthy and sustainable food system and diet for a most of Ireland's population.

1.4 Compliance, Monitoring and Complexity

The absence of a coherent set of policies also serves to ensure that monitoring of the environment, maintaining good water and air quality and soil health, and ensuring compliance with the Nitrates Directive, are weakly enforced against the much greater pressure to produce increasing quantities of agricultural products at competitive costs. The *Food Vision Strategy's* aim of ensuring that Ireland will become a world leader in sustainable food systems over the next decade really

[12] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions — A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system. COM(2020) 381 final; Brussels, 20.5.2020.

means more production at increasing intensity, to the detriment of the environment.

As an example of weak enforcement, we can point to the small number of farm inspections undertaken by local authorities and the Department of Agriculture, Food and the Marine (DAFM) and by Inland Fisheries Ireland (IFI). The percentage of farms inspected by local authorities and DAFM was quite low, at 5% or less, even though this proportion was increased to 10% in accordance with the European Commission decision granting Ireland a derogation from the Nitrates Directive in 2022. These inspections showed that 21% of derogation farms inspected in 2024 were found to be non-compliant with the regulations.

Water quality monitoring is undertaken by the EPA, as Regulation 37 of the European Union (Good Agricultural Practices for the Protection of Waters) (Amendment) Regulations (S.I. 393 of 2022) requires the EPA to prepare an annual report of the results of water quality monitoring to support the assessment of the impact of the nitrates derogation, as required by the Commission Implementing Decision (EU) 2022/696.

The above list clearly shows the complexity and overlapping nature of the many policies, programmes, agricultural plans, farm inspections and water quality monitoring activities which attempt to reduce and control the environmental impacts of the type of agriculture practiced in Ireland. Therefore we need to ask if that type of agriculture, which consists primarily of animal farming for meat and milk, is the most appropriate for this country and its climate. Ireland is unique among EU Member States in having the lowest proportion of its agricultural land under tillage (for example, cereal growing) and by far the highest proportion of its agricultural land under grass, for grazing livestock.

Secondly, we need to consider if the proposed draft Sixth Nitrates Action Programme 2026-2029, really addresses the root causes of water and air pollution from agricultural sources, and we have to ask if this proposed Sixth NAP makes any attempt to introduce environmental and social sustainability, and circularity, into Irish agriculture.

1.5 Water Quality Status

The proposed Draft Sixth Nitrates Action Programme 2026-2029 states that agriculture is the most common land use in Ireland, accounting for almost 70% of the land area, and consequently has been identified as the most prevalent pressure on water quality, impacting over 1,000 water bodies, in two thirds of which agriculture is a significant pressure.[13]

[13] The proposed Draft Sixth Nitrates Action Programme 2026-2029, section 1.3, page 12. Department of Housing, Local Government and Heritage, 28 October 2025.

The current EPA water quality assessment highlights that overall, water quality remains in decline, despite significant actions and programmes underway nationally to improve water quality. The evidence shows that there are improvements occurring in some areas and across all sectors, but these are unfortunately being offset by declines elsewhere. Excess nutrients in our waters from agriculture and wastewater remains the greatest issue, together with activities impacting on physical habitat conditions (hydromorphology).[14]

The EPA water quality assessment clearly identifies that the quality of our fresh-water and marine ecosystems is being damaged by activities which release pollutants into the water environment and which damage the physical integrity of aquatic habitats. The main causes are listed by the EPA as:

- 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 wastewater treatment plants, domestic treatment systems and storm water overflows;
- Run-off from hard surfaces in urban environments of sediment and contaminant-loaded water; and,
- Run-off of nutrients and sediment from forestry operations.[15]

The EPA water quality assessment also reports that nitrate concentrations are too high in 44% of the sites assessed in the country's rivers. These are predominantly located in the east, south east and south of the country. Despite this, concentrations of nitrate have reduced at 39% of sites when compared with 2016-2021. In contrast, 6% of river sites showed increasing concentrations, and 55% were unchanged (see **section 3.2.1** below).

27% of river sites have high phosphorus concentrations; and, since the last assessment in 2016-2021, 16% of river sites have increasing concentrations, 12% of sites showed reductions and 73% unchanged. Two-thirds (68%) of monitored lakes are classed as either high or good quality for total phosphorus for 2022-2024. The remaining one third (32%) have unsatisfactory phosphorus concentrations, and these include five lakes in Counties Monaghan and Cavan in the north-east midlands.

It is clear that while excessive quantities of nitrate from farming activities are principal cause of water pollution, high concentrations of phosphorus are also a significant cause. These findings raise the question of how to prevent large

[14] Water Quality in Ireland report, 2019 – 2024, Section 8.6, Conclusion, page 107. Environmental Protection Agency, published 17 October 2025.

[15] Water Quality in Ireland report, 2019 – 2024, Executive Summary, What are the Problems, page 112. Environmental Protection Agency, published 17 October 2025.

quantities of nitrate and phosphorus from being washed off farmland, and entering streams, rivers and lakes. And this of course raises the further question — will the measures in the proposed new Sixth Nitrates Action Programme be adequate to protect water quality and aquatic ecosystems and species?

1.6 The Proposed Measures

The Department's consultation document states that:

> "*the draft Sixth NAP has been developed to build on the current momentum and engagement that exists across Ireland's agri-food sector to protect and improve water quality. The draft Sixth NAP outlines how the State intends to deliver agricultural related water quality improvements through the correct balance of regulation, knowledge transfer/awareness raising and incentivisation, and through the implementation of targeted measures that are grounded in science".*[16]

Regulatory measures being considered for the Sixth NAP include:

- A requirement to know a **farm's nutrient balance** at the level of each individual farm;
- Improved **nutrient distribution on fragmented farms** (to prevent excessive and surplus nutrients being applied to certain areas, with the subsequent risk of nutrient loss);
- **Increased slurry and soiled water storage capacity** requirements (based on the information that the volumes of slurry and soiled water produced by a dairy cow have increased compared to values set when Ireland's First NAP was introduced in 2006);
- **Chemical nitrogen allowances for grassland and arable crops**;
- **Timing of nutrient application for arable crops**;
- **Expansion of DAFM's organic nutrient movement database**;
- **Continued and increased focus on compliance and enforcement**, under the National Agricultural Inspection Programme;
- Overall **review of the Good Agricultural Practice (GAP) Regulations**;
- **Expansion of the Agricultural Sustainability Support and Advisory Programme** (ASSAP);

[16] The proposed Draft Sixth Nitrates Action Programme 2026-2029, section 5, page 77. Department of Housing, Local Government and Heritage, 28 October 2025.

- **Continuation of the "Farming for Water"** European Innovation Partnership (EIP) to the end of 2029;
- **Knowledge transfer and awareness raising** for both farmers and farm advisers;
- **Research on soil analysis** to better quantify plant available nutrients;
- **Research on cover crop establishment**; and,
- **Continuation of Teagasc's Agricultural Catchments Programme**.

These measures, many of which are a continuation of existing measures under the Fifth NAP, are summarised in Table 7 on pages 88 to 91 of the Department's consultation document, with more detailed explanations on the preceding pages in the document (see also sections **3.2.2** and **3.2.3** below).

The question which we have to ask is whether these measures are adequate to protect soil and water? Will they reduce waste of nutrients and reduce pollution? Will they reduce waste generally? Have similar measures been effective in previous years? Will the proposed measures address air pollution by ammonia? Will the proposed measures address the problem of large-scale emissions of methane by ruminant animals, a problem which is causing Ireland to miss its emission reduction targets under the UNFCCC legislation? And of course does the proposed NAP seriously address climate change caused by the type of agriculture we practice in Ireland?

1.7 Setting the Wider Context – Agriculture and the Increasing Use of Nitrogenous Fertiliser

Before we can properly consider the draft Sixth Nitrates Action Programme, it is our belief that some fundamental issues must first be addressed, especially from a historical and land use perspective.

Agriculture is one of the world's oldest means of production, dating back 12,000 years, when pre-historic civilisations made the transition from nomadic hunter-gathering to farming in permanent settlements. In the millennia that followed, agriculture acted as a major force of progress and helped develop many of the European cities and the agricultural landscapes with which we are familiar today.

With the arrival of Europe's Industrial Revolution, agriculture began to gradually diminish in importance and prominence as countries moved more towards extraction of raw materials, manufacturing, processing, distribution, marketing and the development of a wide range of services.

Farming became mechanised and more intensive, with increasing numbers of livestock being reared and managed on a smaller number of farms, many of them large-scale factory-type facilities; and this process was accelerated by the

European Union's common agricultural policy (CAP), which has dominated Europe's farming since its introduction in 1962. The number of livestock farms in Europe declined sharply as a consequence of the CAP, and huge numbers of small farms were lost, revealing a massive intensification of agriculture.

The productivity of agriculture has increased greatly over the last decades, driven and enabled significantly by the expanded availability and increased use of fertilisers, pesticides and a wide variety of other agricultural chemicals. This increased productivity has, however, also resulted in significantly increased pollution of groundwaters and surface waters from nitrates, phosphorus, pesticides and residues of pesticides, creating a major environmental pressure on water bodies throughout the European Union (EU).[17]

In addition to these problems, the annual economic cost of nitrogen losses in the EU as a whole has been estimated at €70 billion, 81% of agricultural nitrogen input to aquatic systems is caused by livestock production, and 87% of ammonia emissions from agriculture to atmosphere are caused by livestock production.[18]

The European Environment Agency has pointed out that nitrogen surpluses from the over-fertilisation of grass-land and crops have remained very high in northern and central Europe. Meanwhile, the unsustainably high nitrate concentration in groundwater has not decreased for 30 years, and there has been only very limited progress in reducing pesticide use since 2011.[19]

In response, the European Commission and Parliament have been introducing reforms of the Common Agricultural Policy and farming subsidies in an attempt to halt the decline of small farms, to protect them from the intensification of agriculture promoted by decades of previous policies, and to protect the environment, by avoiding intensive farming and reducing the use of pesticides, fertilisers and chemicals as part of a zero-pollution ambition.

A recurrent accusation levelled at the CAP is its weak enforcement of environmental standards, despite the fact that agriculture is a significant driver of pollution, accounting for more than 10% of the EU's greenhouse gas emissions which the European Environment Agency (EEA) attributes to three sources:

- CH_4 (methane) from enteric fermentation, the digestive process in ruminant animals such as cattle, sheep and goats;

[17] European Environment Agency, 'Water and Agriculture: Towards Sustainable Solutions' (Publications Office of the European Union 2021).

[18] https://environment.ec.europa.eu/topics/water/nitrates_en

[19] European Environment Agency, 'Water and Agriculture: Towards Sustainable Solutions' (Publications Office of the European Union 2021).

- N_2O (nitrous oxide) mainly from the use of nitrogen-based synthetic fertilisers; and,

- CH_4 (methane) from the management and disposal of manure.

Although the agriculture sector is subject to the EU's overarching goal to gradually reduce greenhouse gas emissions and reach climate neutrality by 2050, the reduction achieved so far has been extremely limited. For example, the European Environment Agency (EEA) has estimated that, between 2005 and 2021, agricultural emissions increased in 13 member states, with Estonia exceeding the 30% mark. Based on current projections, the Agency predicts a modest decline of 4% by 2030 compared with 2005 levels, or even to an 8% decline if additional climate measures are put in place.[20]

This slow pace is a matter of serious concern, given that at least 25% of global warming is driven by methane, a gas 80 times more harmful than CO_2 in the first 20 years after being released into the atmosphere. Meanwhile, artificial fertilisers and chemical pesticides commonly used to maintain crop yields are a factor causing biodiversity loss, poor-quality water, high nitrate levels in drinking water, degraded soils and pest resistance, and have been linked to chronic illnesses in human populations.

1.8 The Nitrates Directive

For more than 30 years, the EU Nitrates Directive[21] has been the principal item of European legislation for the protection of water threatened by over-exploitation of agricultural land and the resulting nitrate contamination. The Directive was issued in 1991 to ‘‘*protect water quality across Europe by preventing nitrates from agricultural sources polluting ground and surface waters and by promoting the use of good farming practices’’*.

The Nitrates Directive also supports the implementation of the Water Framework Directive, which aims for all European surface waters to achieve "good status" by 2027. Alongside the Urban Waste Water Treatment Directive (UWWTD), the Nitrates Directive aims to improve the quality of EU water bodies, as nutrient pollution can be an obstacle to achieving “good status”.

As mentioned briefly above, the Nitrates Directive is also linked with the EU Biodiversity and Farm to Fork strategies, both of which set a shared objective of reducing nutrient losses by at least 50% by 2030 while maintaining soil fertility.

[20] All you need to know about the EU agriculture sector. Euronews, 13 February 2024. https://www.euronews.com/my-europe/2024/02/13/all-you-need-to-know-about-the-eu-agriculture-sector#

[21] Council Directive of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources (91/676/EEC).

The Nitrates Directive is also one of the Statutory Management Requirements which European farmers are obliged to respect in order to receive the subsidies provided in the cross-compliance system of the Common Agriculture Policy, and the individual economic and other benefits given to farmers are reduced proportionally to any detected noncompliance with the Directive.

The Nitrates Directive is therefore a very important piece of legislation, with the following objectives, in Article 1:

- reducing water pollution caused or induced by nitrates from agricultural sources and,
- preventing further such pollution.

It is clear that the Directive, while curbing the worst excessive of nitrate pollution in farming, has failed in its objective to reduce water pollution from agricultural nitrates, and preventing increases in it.

All available evidence points to a eutrophication crisis in the EU of epic proportions, that represents a significant threat to the ecological integrity of the environment.[22] Ammonia from spreading of agricultural livestock slurry constitutes a major contributor to air pollution as well as water pollution and a major public health crisis. Ammonia also degrades to nitrous oxide, a greenhouse gas, which additionally contributes to climate change.

Implementation of the Nitrates Directive requires EU Member States to undertake all of the following actions:[23]

- Designate Nitrate Vulnerable Zones (NVZs):
    1. Which can be specified areas of land which drain into polluted waters, or waters at risk of pollution and which contribute to nitrate pollution; or
    2. EU Member States can also choose to apply measures to the whole territory (instead of designating NVZs).
- Establish Codes of Good Agricultural Practice, to be implemented by farmers voluntarily, including:
    3. measures limiting the periods when nitrogen fertilisers can be applied on land to target application to periods when crops require nitrogen and prevent nutrient losses to waters;

[22] Report from The Commission to the Council and the European Parliament on the implementation of Council Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources based on Member State reports for the period 2016–2019 {SWD(2021) 1001 final} https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2021%3A1000%3AFIN&qid=1633953687154

[23] https://environment.ec.europa.eu/topics/water/nitrates_en

4. measures limiting the conditions for fertiliser application (on steeply sloping ground, frozen or snow-covered ground, near water courses, etc.) to prevent nitrate losses from leaching and run-off;
5. requirement for a minimum storage capacity for livestock manure; and,
6. crop rotations, soil winter cover and catch crops to prevent nitrate leaching and run-off during wet seasons.

- Establish Nitrate Action Programmes to be implemented by farmers within NVZs on a compulsory basis, including:
    7. measures already included in Codes of Good Agricultural Practice that become mandatory in NVZs;
    8. other measures, such as limitation of fertiliser application (mineral and organic), taking into account crop needs, all nitrogen inputs and soil nitrogen supply, maximum amount of livestock manure to be applied (corresponding to 170 kg nitrogen/ha/year);
    9. recommendations for establishing action programmes are available for each type of measure to be included in action programmes, according to the pedo-climatic region in Europe, so as to minimise the risk of water pollution; and,
    10. the Action Programmes must be revised at least every four years.

- Limit the application of nitrogen from manure:
    11. In areas already polluted by nitrates, the Directive prescribes that the highest amount of nitrogen from manure that can be applied annually is 170 kg/ha. At the request of EU Member States, and provided that they justify scientifically that this shall not lead to higher pollution, the Commission can adopt implementing Decisions (commonly referred as derogations) that allow the application of higher maximum limits of nitrogen from manure in specific areas and under particular conditions. Such derogations do not exempt Member States from the water quality objectives of the Directive, nor from any other of its measures.

- Identify water bodies (streams, rivers, lakes, transitional waters and coastal waters) which have become polluted, or waters at risk of pollution.

It is clear that, in Ireland anyway, the Nitrates Directive has failed to protect water quality and aquatic biodiversity; nitrogen application limits have been exceeded, and successive Action Programmes have not brought about the necessary major improvements in water quality which are urgently needed.

In answer to the questions which we raised at the end of **section 1.6** above, we can say that Ireland's Nitrates Action Programmes have not protected soil and water, have not reduced waste of nutrients, have not reduced water and air pollution from agricultural sources, have not protected Ireland's soils, have not addressed emissions of methane by ruminant animals, and have not seriously addressed climate change caused by the type of agriculture we practice in Ireland?

1.9 Is Irish Agriculture Environmentally Damaging and Fundamentally Unsustainable?

The environmentally damaging consequences of the Common Agricultural Policy (CAP) were identified several years ago in a report by the European Court of Auditors,[24] and summarised by An Taisce:[25]

> *"Despite the vast amounts of EU taxpayers' cash being poured into agriculture, including over €100 billion earmarked to reduce greenhouse gas emissions from the sector in the last seven years, the new report from the European Court of Auditors (ECA) has just confirmed that agricultural emissions have not come down at all since 2010. Indeed, Irish agricultural emissions have actually increased.*
>
> *This, according to the ECA, "is because most measures supported by the Common Agricultural Policy (CAP) have a low climate-mitigation potential, and the CAP does not incentivise the use of effective climate-friendly practices".*
>
> *Livestock emissions account for around half of emissions from agriculture; they have not decreased since 2010, and have risen sharply in Ireland in this period as a result of national government policy.*
>
> *These emissions, the ECA notes, "are directly linked to the size of the livestock herd, and cattle cause two thirds of them. The share of emissions attributable to livestock rises further if the emissions from the production of animal feed (including imports) is taken into account".*
>
> *The report also notes that the CAP supports climate-unfriendly practices, such as paying farmers who cultivate drained peatlands, which represent less than 2% of EU farmland but which emit 20% of EU agricultural greenhouse gases.*
>
> *Drainage of peaty lands in Ireland to convert them to grass production to feed livestock is a major additional source of GHG emissions in Ireland.*

[24] European Court of Auditors, 2021. Common Agricultural Policy and climate — Half of EU climate spending but farm emissions are not decreasing, ECA Report No 16, July 2021.

[25] An Taisce Press Release, 23 June, 2021.

Overall, Ireland's grassland soils are net emitters of approximately 7 million tonnes of CO_2 per annum.

Crucially, the ECA report notes that "EU law does not currently apply a polluter-pays principle to greenhouse gas emissions from agriculture." Were this to change, the highly emissions and pollution-intensive Irish model of concentrating on large-scale dairy and beef production, primarily for export, would be liable to paying for the pollution it creates.

This would likely render much of this sector unviable and calls into question Irish government policies such as Food Harvest 2020, Food Wise 2025 and the upcoming plan for 2030, all of which are predicated on ever-expanding dairy herd numbers".

1.9.1 A Recommended Transition to a Vegan Agricultural System

An earlier report by James O'Donovan, entitled "*Transition to an Irish Vegan Agricultural System"*,[26] points to major inefficiencies in the global agricultural system, in which 77% of total agricultural land is used to support livestock, producing only 18% of the global calorie supply.

This excellent and very detailed report advocates a transition from meat and dairy production in Ireland to a vegan agricultural system, pointing out that in Ireland, 97% of agricultural land is used for meat and dairy production. In the EU, in 2019, between 69% (€28.5 billion) and 79% (€32.6 billion) of the Common Agricultural Policy (CAP) direct payments were for livestock rearing.

The report recommends most small farms and mainly unprofitable farms should be converted from livestock-based agriculture to payment for ecosystem services, up to a total 43,600 small farms. This would potentially free up 0.46 Mha of land for restoration of native forestry, grasslands and wetlands; and these recommendations, if implemented, would directly benefit soil health, the environment, biodiversity and climate.

James O'Donovan's report concludes that:

"The most effective way for agriculture to change will come from changes in consumer behaviour supported by legal and policy supports for plant based agriculture from national governments and Global Agreements. In Europe and Ireland the CAP needs to change to stop subsidising meat and dairy production and instead support ecosystem services or plant based agricultural systems. A transition to a vegan agricultural system will enable us to:

- *stop agriculture from consuming more forests, grasslands and other ecosystems;*

[26] James O'Donovan, 2019. "Transition to an Irish Vegan Agricultural System". 96pp.

- *eliminate pesticides and antibiotics from agriculture;*
- *gradually restore ecosystems and biodiversity and thereby reverse climate change;*
- *boost the productivity of farms as plant based agriculture is much more efficient;*
- *raise the efficiency of water and fertilizer use worldwide;*
- *reduce waste in food production and distribution as grains and legumes are much easier to store without deterioration.*

Globally switching to a whole food plant based diet has the potential to return millions of acres of land to wild habitat, to reverse rainforest destruction, to restore the health and volume of our freshwater rivers and lakes, to prevent further species extinctions, to eliminate billions of tons of pollutants (cow dung, carbon dioxide, methane, nitrous oxides, and ammonia), and to make a major contribution to stabilising and reversing climate change. Gradually as people become conscious of the ethical, environ- mental, economic, and health benefits then they will find the motivation to choose a plant based diet. When this happens is up to all of us. The faster we transition to a non-violent VAS (Vegan Agricultural System) the faster we can stem the haemorrhage of biodiversity loss and restore our health and the health of the planetary systems we depend on".

This report on the transformation of Irish agriculture summarises very well our own view of the situation and what should be done in Ireland to create and implement the necessary changes to a more sustainable form of agriculture which would include a high level of environmental protection, nature restoration, and significant reduction of water pollution.

1.9.2 The EAT–Lancet Commission's Authoritative Reports

Other authoritative reports on food systems, agriculture and human health are the EAT–Lancet Commission's reports on "*Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems"* (2019), and "*The EAT–Lancet Commission on healthy, sustainable, and just food systems"* (2025).[27]

The 2025 EAT-Lancet Commission on healthy, sustainable, and just food systems presents new evidence-based insights on nutrition and human health, within safe and just planetary boundaries. New to this Commission are updates to the planetary health diet, measurement and assessment of the impact food systems have in driving transgressions of planetary boundaries, an exploration of multi-dimensional and underlying issues of food justice, new research and

[27] https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(25)01201-2/abstract

extensive modelling insights, and transformative and action-based recommendations and roadmaps.

The global context has shifted dramatically since publication of the first EAT–Lancet Commission in 2019, with increased geopolitical instability, soaring food prices, and the COVID-19 pandemic exacerbating existing vulnerabilities and creating new challenges. However, food systems remain squarely centred at the nexus of food security, human health, environmental sustainability, social justice, and the resilience of nations. Actions on food systems strongly impact the lives and wellbeing of all and are necessary to progress towards goals highlighted in the Sustainable Development Goals, the Paris Agreement, and the Kunming–Montreal Global Biodiversity Framework.

In this time of increasing instability, changing our food production systems and methods of agricultural production offer an unprecedented opportunity to build the resilience of environmental, health, economic, and social systems, and are uniquely placed to enhance human wellbeing while also contributing to Earth-system stability.

The Commission lays the foundations for food systems to take a central role in the post-SDG era, presenting global, regional, local, and individual means to achieve that while creating and retaining a just social foundation, that protects human health and minimises harms to planetary health.

These reports could best be described as a healthy diet for a healthy planet, and were the subject of much discussion, including unfavourable criticism from organisations with an interest in maintaining the environmentally damaging form of industrial food production which has caused huge biodiversity loss, water and air pollution and soil damage.

The 2019 and 2025 reports provide much evidence that, while food production systems have the potential to nurture human health and support environmental sustainability, our current food production trajectories threaten both. The EAT–Lancet Commission addresses the need to feed a growing global population a healthy diet while also defining sustainable food systems that will minimise damage to our planet.

The Commission quantitively describes a universal healthy reference diet, based on an increase in consumption of healthy foods (such as vegetables, fruits, whole grains, legumes, and nuts), and a decrease in consumption of unhealthy foods (such as red meat, sugar, and refined grains) which would provide major health benefits, and also increase the likelihood of attainment of the Sustainable Development Goals. This is set against the backdrop of defined scientific boundaries that would ensure a safe operating space within six Earth systems, towards sustaining a healthy planet.

The Lancet Commission identified food production as the largest pressure caused by humans on the environment, and recommended major changes to diets necessary to avoid reduced life expectancy and environmental degradation, including soil degradation. The dietary recommendations call for a **plant-based diet** consisting mostly of fruit, vegetables, whole grains, legumes, nuts, and unsaturated oils, a low to moderate amount of seafood and poultry, and **no or a low quantity of red meat, processed meat, added sugar, refined grains, and starchy vegetables**. The Lancet Commission showed that it is possible to feed a global population of nearly 10 billion people a healthy diet within the recommended food production boundaries by 2050. Food for these 10 billion humans must be provided **using no additional land**.

At current the current human population of 7.9 billion, replacing meat and dairy production with plant-based food production would result in less cropland required for the same total calorie production, while freeing up a significant proportion of global agricultural land.

This extra land could instead be converted to natural or semi-natural habitats to support soil health, carbon sequestration and biodiversity. The establishment of field margins through EU incentives may be a practical strategy to help achieve this. In Ireland, replacement of meat and dairy agricultural land with forest could help achieve the aims of the EU Green Deal targets for 2030, Farm to Fork strategy and EU Biodiversity Strategy.

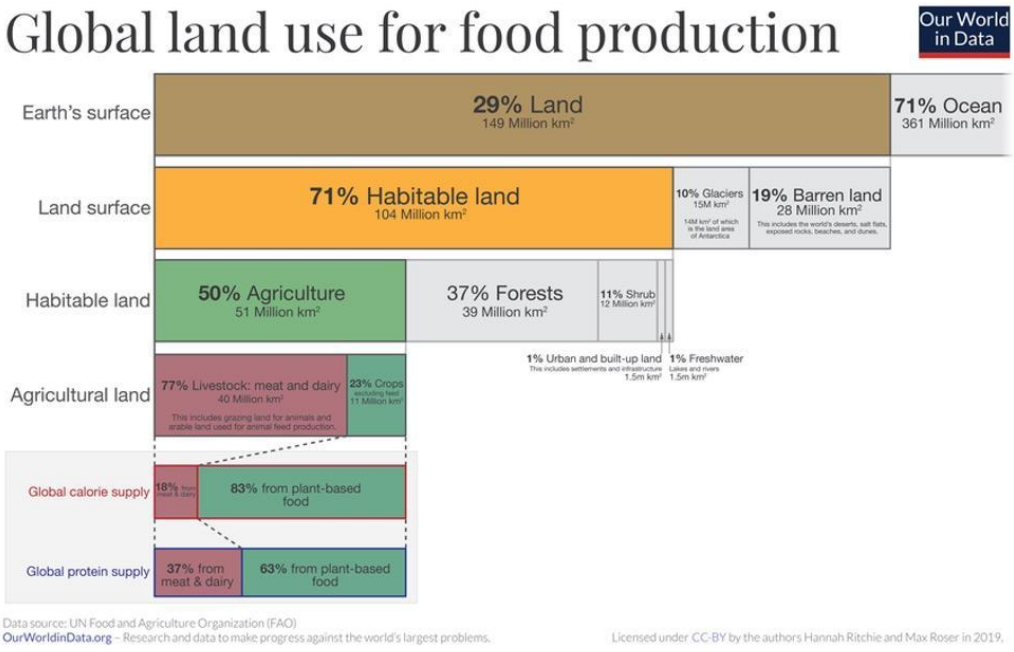

Figure 1: **Our World In Data. Note the large proportion (77%) of land devoted to producing just 18% of global calorie supply**.

1.9.3 Key Messages From the EAT–Lancet Commission's Reports

It is our recommendation that the following key messages from the EAT–Lancet Commission reports would benefit not only people, human health and ecosystems, but would also benefit the environment and land use, as more land could be released from intensive production of meat.

"1. Unhealthy and unsustainably produced food poses a global risk to people and the planet. More than 820 million people have insufficient food and many more consume an unhealthy diet that contributes to premature death and morbidity. Moreover, global food production is the largest pressure caused by humans on Earth, threatening local ecosystems and the stability of the Earth system.

2. Current dietary trends, combined with projected population growth to about 10 billion by 2050, will exacerbate risks to people and planet. The global burden of non-communicable diseases is predicted to worsen and the effects of food production on greenhouse-gas emissions, nitrogen and phosphorus pollution, biodiversity loss, and water and land use will reduce the stability of the Earth system.

3. Transformation to healthy diets from sustainable food systems is necessary to achieve the UN Sustainable Development Goals and the Paris Agreement, and scientific targets for healthy diets and sustainable food production are needed to guide a Great Food Transformation.

4. Healthy diets have an appropriate caloric intake and consist of a diversity of plant-based foods, low amounts of animal source foods, unsaturated rather than saturated fats, and small amounts of refined grains, highly processed foods, and added sugars.

5. Transformation to healthy diets by 2050 will require substantial dietary shifts, including a greater than 50% reduction in global consumption of unhealthy foods, such as red meat and sugar, and a greater than 100% increase in consumption of healthy foods, such as nuts, fruits, vegetables, and legumes. However, the changes needed differ greatly by region.

6. Dietary changes from current diets to healthy diets are likely to substantially benefit human health, averting about 10·8–11·6 million deaths per year, a reduction of 19·0–23·6%.

7. With food production causing major global environmental risks, sustainable food production needs to operate within the safe operating space for food systems at all scales on Earth. Therefore, sustainable food production for about 10 billion people should use no additional land, safeguard existing biodiversity, reduce

consumptive water use and manage water responsibly, substantially reduce nitrogen and phosphorus pollution, produce zero carbon dioxide emissions, and cause no further increase in methane and nitrous oxide emissions.

8. *Transformation to sustainable food production by 2050 will require at least a 75% reduction of yield gaps, global redistribution of nitrogen and phosphorus fertiliser use, recycling of phosphorus, radical improvements in efficiency of fertiliser and water use, rapid implementation of agricultural mitigation options to reduce greenhouse-gas emissions, adoption of land management practices that shift agriculture from a carbon source to sink, and a fundamental shift in production priorities.*

9. *The scientific targets for healthy diets from sustainable food systems are intertwined with all UN Sustainable Development Goals. For example, achieving these targets will depend on providing high-quality primary health care that integrates family planning and education on healthy diets. These targets and the Sustainable Development Goals on freshwater, climate, land, oceans, and biodiversity will be achieved through strong commitment to global partnerships and actions.*

10. *Food systems sit at the nexus of health, environment, climate, and justice. A food systems transformation is fundamental for solving crises related to the climate, biodiversity, health, and justice. The central position of food systems emphasises the interdependent nature of these crises, rather than each crisis separately, which highlights the need to position food systems change as a global integrator across economic, governance, and policy domains.*

11. *The updated planetary health diet (PHD) has an appropriate energy intake; a diversity of whole or minimally processed foods that are mostly plant sourced; fats that are primarily unsaturated, with no partially hydrogenated oils; and small amounts of added sugars and salt. The diet allows flexibility and is compatible with many foods, cultures, dietary patterns, traditions, and individual preferences. The PHD also pro ides nutritional adequacy and diminishes the risks of non-communicable diseases. At present, all national diets deviate substantially from the PHD, but a shift to this pattern could avert approximately 15 million deaths per year (27% of total deaths worldwide). Such a transition would reduce the rates of many specific non-communicable diseases and promote healthy longevity.*

12. *Food drives five planetary boundary transgressions, including land system change, biosphere integrity, freshwater change, biogeochemical flows, and approximately 30% of greenhouse gas emissions driving climate change. How and where food is produced, which foods are produced and consumed, and how much is lost and wasted, all contribute to planetary boundary transgressions. No safe solution to climate and biodiversity crises is possible without a global food systems transformation. Even if a global energy transition away from fossil fuels occurs, food systems will cause the world to breach the Paris Climate agreement of limiting global mean surface temperature to 1·5°C.*

13. *Human rights related to food systems (i.e., the rights to food, a healthy environment, and decent work) are not being met, with nearly half the world's population below the social foundations for these rights. Meanwhile, responsibility for planetary boundary transgressions from food systems is not equal: the diets of the richest 30% of the global population contribute to more than 70% of the environmental pressures from food systems. Just 1% of the global population is in a safe and just space. These statistics highlight the large inequalities in the distribution of both benefits and burdens of current food systems.*

    National policies that address inequities in the distribution of benefits and burdens of current food systems would aid in ensuring food-related human rights are met.

14. *The planetary health diet (PHD) needs to be available, affordable, convenient, aspirational, appealing, and delicious. To increase demand for healthy sustainable diets and enable necessary dietary shifts, food environment interventions, next-generation culinary research and development, increased purchasing power, and protection and promotion of healthy traditional diets are important actions.*

15. *A food systems transformation following recommendations from the EAT–Lancet Commission — which include a shift to healthy diets, improved and increased agricultural productivity, and reduced food loss and waste — would substantially reduce environmental pressures on climate, biodiversity, water, and pollution. However, no single action is sufficient to ensure a healthy, just, and sustainable food system. Comparing 2050 values with the current state (as of 2020), a shift to healthy diets in isolation could lead to a 15% reduction in agricultural emissions, compared with a 20% reduction when all three actions are implemented simultaneously with improvements in productivity and food loss and waste.*

Individually, all three actions modestly reduce future nitrogen and phosphorous use (i.e., a 27–34% increase by 2050 with individual actions vs a 41% increase under the business-as-usual scenario); however, in combination they substantially reduce future growth in nitrogen and phosphorous use (i.e., a 15% increase compared with 2020 levels of use).

16. *Additional environmental benefits are accrued through sustainable and ecological intensification practices. Unprecedented investments and effort in these practices could potentially result in a net-zero food system. A diversity of context-specific practices can sequester additional carbon biomass, create and connect habitats, reduce nutrient applications, and increase the interception and capture of excessive crop fertiliser before it pollutes groundwater and surface water systems. These practices can be enabled by securing equitable access to land and water resources, strengthening public advisory services, addressing structural imbalances between producers and dominant agribusinesses, and through public and private sector investments that support farmers shifting towards sustainable practices.*

17. *A food systems transformation following recommendations from the EAT–Lancet Commission could lead to a less resource-intensive and labour-intensive food system that can supply a healthy diet for 9·6 billion people, with modest impacts on average food costs. However, such a transformation would have profound implications for what, how, and where food is produced, and for people involved in these processes. For example, as a part of this restructuring, some sectors would need to contract (e.g., a 33% reduction in ruminant meat production) and others would need to expand (e.g., a 63% increase in fruit, vegetable, and nut production) compared with 2020 production levels.*

18. *Justice is needed to unlock and accelerate action for transformation. A fair distribution of opportunities and resources—such that the rights to food, a healthy environment, and decent work are met, and distribution of the responsibility to produce, distribute, and consume healthy diets within planetary boundaries is fair — are the basis of a successful food systems transformation. Power asymmetries and discriminatory social and political structures prevent these rights from being met, which results in harms to people's health, precarious livelihoods for food systems workers, and lack of voice, undermining freedom, agency, and dignity. Ensuring liveable wages and collective bargaining, while regulating and limiting market concentration and improving transparency, accountability, representation, and access to information, are all*

impactful actions. We emphasise the protection of basic human rights in conflict areas as a fundamental foundation of justice.

19. *Unprecedented levels of action are required to shift diets, improve production, and enhance justice. A just transformation requires building coalitions with actors from inside and outside the food system, identifying bundles of actions, developing national and regional roadmaps for implementation, unlocking finance for the transformation, and rapidly putting joint plans into action. Such efforts should closely align with other sustainability and health initiatives (e.g., the Paris Agreement, Kunming–Montreal Global Biodiversity Framework, and nation-specific food-based dietary guidelines). These frameworks have all identified food systems actions as powerful, particularly in their capacity to integrate across goals. Mobilising and repurposing finance is essential for enabling It this transformation."*

It is very clear from these recommendations, made by a consortium of the world's most experienced scientists encompassing a wide range of disciplines, that Ireland food production system – and that includes all of our agricultural systems – fall far short of providing a healthy diet for people and planet.

The "*Food Vision Strategy",* quoted above, which proposes that Ireland should become a world leader in sustainable food systems, is not compatible with the goals of ensuring a healthy diet for everyone, and for the health of ecosystems and the planet. It would be fair to say that Ireland's agriculture, based almost entirely on livestock farming and on meat and dairy production, is about as far from the recommended planetary health diet as it is possible to get.

As the 2025 EAT Lancet report states,[28] *"Unprecedented levels of action are required to shift diets, improve production, and enhance justice".* Unfortunately we have not found any indication in the proposed Sixth Action Programme for Nitrates that this transformation has been seriously considered.

[28] The EAT–Lancet Commission on healthy, sustainable, and just food systems. Lancet 2025; 406: 1625–700. Published online, 02 October 2025. https://doi.org/10.1016/

2. ZERO WASTE ALLIANCE IRELAND (ZWAI)

At this point we consider that it is appropriate to mention briefly the background, aims, activities, policies and strategy of ZWAI, and to list some of our previous submissions to Irish Government departments and to the European Commission.

2.1 Origin and Early Activities of ZWAI

Zero Waste Alliance Ireland (ZWAI), established in 1999, and registered as an Irish company limited by guarantee in 2004, is a Non-Government Environmental Organisation (eNGO) and a charity registered in Ireland. ZWAI has prepared and submitted to the European Commission, the Irish Government and to Irish State Agencies many policy documents on waste management and waste elimination, and continues to lobby the Irish Government and the European Commission on using resources more sustainably, on promoting re-use, repair and recycling, and on development and implementation of the Circular Economy.

One of our basic guiding principles is that human societies must behave like natural ecosystems, living within the sustainable flow of energy from the sun and plants, producing no materials or objects which cannot be recycled back into the earth's systems, or reused or recycled into our technical systems, and should be guided by economic systems and practices which are in harmony with personal and ecological values.

Our principal objectives are:

i) sharing information, ideas and contacts,

ii) finding and recommending environmentally sustainable and practical solutions for domestic, municipal, industrial and agricultural waste management and for more efficient and ecologically appropriate uses of natural resources such as scarce minerals, water and soil;

iii) lobbying Government and local authorities to implement environmentally sustainable waste management practices, including clean production, elimination of toxic substances from products, re-use, recycling, segregation of discarded materials at source, and other environmentally and socially beneficial practices;

iv) lobbying Government to follow the best international practice and EU recommendations by introducing fiscal and economic measures designed to penalise the manufacturers of products which cannot be re-used, recycled or composted at the end of their useful lives, and to financially support companies making products which can be re-used, repaired, recycled or are made from recycled materials;

v) raising public awareness about the long-term damaging human and animal health and economic consequences of landfilling and of the

destruction by mass burning or incineration of potentially recyclable or re-usable materials;

vi) investigating, raising public awareness and lobbying Irish Government departments and agencies about our country's failure to take adequate care of vulnerable and essential natural resources, including clean water and air, biodiversity, and soil;

vii) advocating changes in domestic and EU legislation to provide for more ecologically appropriate, environmentally sustainable and efficient uses of natural resources; and,

vi) maintaining contact and exchanging information with similar NGOs and national networks in the European Union and in other countries, and with international zero waste organisations.

2.2 Our Basic Principles

Human communities must behave like natural ones, living comfortably within the natural flow of energy from the sun and plants, producing no wastes which cannot be recycled back into the earth's systems, and guided by new economic values which are in harmony with personal and ecological values.

In nature, the waste products of every living organism serve as raw materials to be transformed by other living creatures, or benefit the planet in other ways. Instead of organising systems that efficiently dispose of or recycle our waste, we need to design systems of production that have little or no waste to begin with.

There are no technical barriers to achieving a "zero waste society", only our habits, our greed as a society, and the current economic structures and policies which have led to the present environmental, social and economic difficulties.

"Zero Waste" is a realistic whole-system approach to addressing the problem of society's unsustainable resource flows – it encompasses waste elimination at source through product design and producer responsibility, together with waste reduction strategies further down the supply chain, such as cleaner production, product repairing, dismantling, recycling, re-use and composting.

ZWAI strongly believes that Ireland should have a policy of not sending to other countries our discarded materials for further treatment or recycling, particularly to developing countries where local populations are exposed to dioxins and other toxic POPs. Relying on other countries' infrastructure to achieve our "recycling" targets is not acceptable from a global ecological and societal perspective.

2.3 What We are Doing

Zero Waste Alliance Ireland has prepared many policy documents on waste management, we continue to lobby the Government of Ireland on the issue of

sustainable resource management, and to express our concern at the failure to address Ireland's waste problems at a fundamental level.

In recent decades, as many older landfills were closed or became better managed (primarily as a consequence of the implementation of European Directives, Irish legislation transposing these Directives, the development of a waste licensing regime by the Environmental Protection Agency, and the establishment of the Office of Environmental Enforcement in 2003), concern about the public health effects of landfills decreased considerably.

ZWAI therefore concentrated more on the objectives of ensuring that Ireland's government agencies, local authorities and other organisations will develop and implement environmentally sustainable resources and waste management policies, especially resource efficiency, waste reduction and elimination, the promotion of re-use, repair and recycling, and the development and implementation of the Circular Economy.

As an environmental NGO, and a not-for-profit company with charitable status since 2005, ZWAI also campaigns for the implementation of the UN **Sustainable Development Goals**, including (but not limited to) Goal 12, Responsible Consumption and Production, and Goal 6, Clean Water and Sanitation (having particular regard to the need to avoid wasting water, and to wasting nutrients contained in our wastewater); and Goal 15, to protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, to halt and reverse land degradation and to halt biodiversity loss

Our work therefore became more focused on responding to public consultations, giving presentations on waste-related topics, and evaluating Irish Government and EU policies on the use, reuse, and recycling of materials and energy, on identifying wasteful practices, and on promoting the Circular Economy. Examples of our submissions and presentations include:

- How Ireland, the European Union and the Irish food industry should address the problems of single-use plastic packaging and plastic waste (March & Nov. 2019);
- Transforming the construction industry so that it could become climate-neutral (instead of being a major emitter of greenhouse gases & toxicants);
- Several observations and submissions addressing the need for recovery and reuse of the phosphorus and nitrogen content of wastewater (2019 to 2023);
- Observations to the European Commission on a proposed revision of the EU Regulation on Shipments of Waste (January 2022);

- Feedback to the European Commission on a proposed Directive on Soil Health – protecting, sustainably managing and restoring EU soils (March 2022);[29]
- Submission in response to a public consultation on the review of Ireland's security of energy supplies (October 2022);[30]
- Submission in response to a public consultation on Ireland's Fourth National Biodiversity Action Plan (November 2022);[31]
- Submission in response to a public consultation on Ireland's National Bioeconomy Action Plan 2023-2025 (January 2023);[32]
- Presentation and illustrated talk on the topic of "*One Earth for All – A Plea for Sustainability"*, given at the National Sustainability Summit, Leopardstown, Dublin (February 2023);[33]
- Submission in response to a public consultation on Ireland's draft Waste Management Plan for a Circular Economy (July 2023);[34]
- Submission in response to a public consultation on the problem of disposable vaping devices (July 2023);[35]
- Observations and recommendations on the increasing European and global problem of waste electronic & electric equipment (WEEE, Sept. 2023);[36]

[29] https://www.zwai.ie/resources/2022/protecting-sustainably-managing-and-restoring-eu-soils/

[30] Submission to the Department of the Environment, Climate and Communications in Response to the Public Consultation on a Review of the Security of Energy Supply of Ireland's Electricity and Natural Gas Systems; https://www.zwai.ie/resources/2022/public-consultation-on-a-review-of-the-security-of-energy-supply-of-irelands-electricity-and-natural-gas-systems/

[31] https://www.zwai.ie/resources/2022/submission-to-the-department-of-housing-local-government-and-heritage-in-response-to-the-public-consultation-on-irelands-fourth-national-biodiversity-action-plan-nbap/

[32] https://www.zwai.ie/resources/2023/zwai-submission-on-irelands-national-bioeconomy-action-plan-2023-2025/

[33] https://www.zwai.ie/resources/2023/the-national-sustainability-summit-one-earth-for-all-a-plea-for-sustainability/

[34] Submission to the Regional Waste Management Planning Offices on the draft Waste Management Plan for a Circular Economy; ZWAI, 05 July 2023: https://www.zwai.ie/resources/2023/submission-on-the-draft-waste-management-plan-for-a-circular-economy/

[35] Submission to the Department of the Environment, Climate and Communications in Response to the Department's Public Consultation on Disposable Vaping Devices; ZWAI, 27 July 2023: https://www.zwai.ie/resources/2023/submission-to-the-decc-on-disposable-vapes-and-why-they-should-be-banned/

[36] Submission by ZWAI to the European Commission on Waste from Electrical and Electronic Equipment — Evaluating the EU Rules; ZWAI, 22 September 2023. https://www.zwai.ie/resources/2023/waste-from-electrical-and-electronic-equipment-weee-evaluating-eu-rules/

- Observations to the European Commission on a Proposed EU Directive on Soil Monitoring and Resilience (November 2023);[37]
- Observations on the Irish Government's draft Green Public Procurement Strategy & Plan (November 2023);[38]
- Observations and feedback to the European Commission on the proposed revision of the EU Waste Framework Directive (November 2023);[39]
- Observations & feedback to the European Commission on revision of Directives 2000/53/EC & 2005/64/EC on End-of-Life Vehicles (December 2023);[40]
- Submission by ZWAI to the Department of the Environment, Climate and Communications in response to the Department's public consultation on proposed amendments to the Access to Information on the Environment (AIE) Regulations 2007-2018 (January 2024);[41]
- Response to the first Public Consultation by the Department of the Environment, Climate and Communications on Ireland's draft National Energy and Climate Plan (March 2024);[42]
- Submission by ZWAI to the European Commission in response to the Commission's public consultation on the evaluation of the Nitrates Directive (91 / 676 / EEC) on Protection of Waters against Pollution caused by Nitrates from Agricultural Sources (March 2024);[43]
- Response to the second Public Consultation by the Department of the Environment, Climate and Communications on Ireland's updated draft National Energy and Climate Plan (June 2024);[44]

[37] Observations and Feedback to the European Commission on the Proposed EU Directive on Soil Monitoring and Resilience; ZWAI, 03 November 2023. https://www.zwai.ie/resources/2023/submission-on-the-proposed-eu-directive-on-soil-monitoring-and-resilience/

[38] https://www.zwai.ie/resources/2023/submission-to-the-decc-on-the-draft-green-public-procurement-strategy-and-action-plan/

[39] https://www.zwai.ie/resources/2023/observations-and-feedback-to-the-european-commission-on-the-proposed-revision-of-the-eu-waste-framework/

[40] https://www.zwai.ie/resources/2023/end-of-life-vehicles-observations-and-feedback-to-the-european-commission/

[41] https://www.zwai.ie/resources/2024/submission-to-the-decc-on-the-proposed-amendments-to-the-access-to-information-on-the-environment-aie-regulations-2007-2018/

[42] https://www.zwai.ie/resources/2024/submission-by-zwai-to-decc-on-irelands-national-energy-climate-plan-necp/

[43] https://www.zwai.ie/resources/2024/submission-by-zwai-to-the-eu-public-consultation-on-the-evaluation-of-the-nitrates-directive/

[44] https://www.zwai.ie/resources/2024/draft-update-of-irelands-national-energy-and-climateplan-necp-submission-by-zwai-to-decc/

- Submission by ZWAI to the European Commission in response to the Commission's public consultation on proposed ecodesign and ecolabelling requirements for computers (July 2024);[45]
- Submission by ZWAI and the Waterford Environmental Forum to the Department of Transport in response to the Department's Public Consultation: "*Moving Together – A Strategic Approach to Improving the Efficiency of the Transport System in Ireland"* (August 2024);[46]
- Submission by ZWAI to the Irish Department of Housing, Local Government and Heritage in response to the Department's Public Consultation on Draft Proposed Additional Measures for Ireland's Fifth Nitrates Action Programme (December 2024);[47]
- Submission by ZWAI to the European Commission in response to the Commission's public consultation on the European Union Ocean Pact, emphasising the importance of Europe's surrounding seas and the Atlantic ocean, and their fundamental in sustaining life on our planet (February 2025);[48]
- Submission by ZWAI to the Department of the Environment, Climate and Communications, in response to a public consultation on Ireland's draft National Implementation Report 2025 to the Aarhus Convention Secretariat (April 2025);[49]
- Submission by Zero Waste Alliance Ireland to the Department for Infrastructure, Northern Ireland, in response to a Transboundary EIA Public Consultation on a Proposed Gold Mine Project in the Sperrin Mountains, County Tyrone (April 2025);[50]
- Submission by ZWAI to the European Commission on proposed draft amendments to Delegated Regulation (EU) 2019/1122 for the purpose of improving carbon accounting in the European Union Registry under Regulation (EU) 2018/841 for the Land use, Land Use Change And Forestry (LULUCF) Sector (May 2025);[51]

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[45] https://www.zwai.ie/resources/2024/ecodesign-and-ecolabelling-requirements-for-computers-zwai-submission-to-eu-commission-ecodesign-and-ecolabelling-requirements-for-computers/

[46] https://www.zwai.ie/resources/2024/moving-together-a-strategic-approach-to-improving-irelands-transport-system/

[47] https://www.zwai.ie/resources/2024/proposed-additional-measures-for-irelands-fifth-nitrates-action-programme-nap/

[48] https://www.zwai.ie/resources/2025/eu-oceans-pact-submission-by-zwai/

[49] https://www.zwai.ie/resources/2025/aarhus-convention-national-implementation-report-2025/

[50] https://www.zwai.ie/resources/2025/consultation-on-a-proposed-dalradian-gold-mine-project-in-the-sperrin-mountains-county-tyrone/

[51] https://www.zwai.ie/resources/2025/submission-on-proposed-eu-carbon-accounting-amendments-for-the-lulucf-sector/

- Submission by ZWAI to the European Commission in response to the Commission's call for evidence on a New Policy Initiative and a New Agenda for Cities and Urban Areas (May 2025);[52]
- Submission by ZWAI to Department of Climate, Energy and the Environment on the draft National Policy Statement and Roadmap on Circular Textiles (July 2025);[53]
- Submission by Zero Waste Alliance Ireland to the European Commission on the Commission's proposed roadmap towards Nature Credits [COM(2025) 374] (30 September 2025);[54] and,
- Submission by Zero Waste Alliance Ireland to the Department of Climate, Energy and the Environment (DCEE) on Ireland's Second Whole of Government Circular Economy Strategy (05 November 2025).[55]

It will be clear that ZWAI is primarily concerned with the very serious issue of discarded substances, materials and goods, whether from domestic, commercial or industrial sources, how these become "waste", and how such "waste" may be prevented by re-design along ecological principles. These same ecological principles can be applied to the many ways in which we abstract and use water as a resource, and to the equivalent volumes of wastewater produced as a consequence of these uses. ZWAI is also very concerned about the effectiveness and appropriateness of Irish and EU policies, legislation, programmes and plans which are the prime determinants of how these "wastes" are managed, controlled and monitored for environmental and societal benefits.

In-depth examination and analysis of national policies have made us very aware of the many disconnections and conflicts between economic, environmental, land-use planning and social policies, frequently resulting in failure to implement necessary changes. While making the submissions listed above, we have welcomed many proposed policy changes; but at the same time we have also considered that it was very necessary to evaluate all proposals in the context of what is best for the environment and society.

ZWAI is a member of the Irish Environmental Network and the Environmental Pillar, and is funded by the **Department of Communications, Climate Action and the Environment** through the **Irish Environmental Network**.

ZWAI is also a not-for-profit company limited by guarantee (Company registration number **394205**), and a registered charity (CRN number **20057244**).

[52] https://www.zwai.ie/resources/2025/submission-to-eu-commission-on-a-new-policy-initiative-and-a-new-agenda-for-cities-and-urban-areas/

[53] https://www.zwai.ie/resources/2025/submission-on-the-draft-national-policy-statement-and-roadmap-on-circular-textiles/

[54] https://www.zwai.ie/resources/2025/roadmap-towards-nature-credits/

[55] https://www.zwai.ie/resources/2025/submission-on-the-proposed-second-whole-of-government-circular-economy-strategy-2026-2028/

Membership has been growing in recent years, and is currently slightly more than 50 individuals, and the company's affairs and activities are supervised by a 6-person Board of Management (Directors), some of whom are regular contributors to submissions, or make presentations at conferences.

In 2019 ZWAI became a full member of the **European Environment Bureau** (EEB); and a member of the **Waste Working Group** of the EEB. Through the EEB, we contribute to the development of European Union policy on waste and the Circular Economy. In November 2021, the EEB established a **Task Force on the Built Environment**; ZWAI is a member of this group, and we contribute to continuing discussions on the sustainability of construction materials, buildings and on the built environment.

3. OUR OBSERVATIONS AND RECOMMENDATIONS IN RESPONSE TO THE DRAFT SIXTH NITRATES ACTION PROGRAMME

3.1 Legal Grounds for the Draft Sixth NAP

3.1.1 Failure to Fulfil the Statutory Objective of Achieving 'Good Water Status' under the European Communities Regulations

It is our opinion that the draft Sixth Nitrates Action Programme (NAP) is indicative of an inadequate policy framework that is structurally incapable of fulfilling the mandatory, legally-binding objective outlined under Regulation 4(1) of the European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003).

The draft NAP should be viewed in the context of the recent landmark ruling of the Court (Ninth Chamber) of 20 November 2025, the case of **European Commission v. Ireland Case C-204/24,**[56] in which the European Court of Justice (ECJ) found Ireland in breach of its obligations under the EU Water Framework Directive (WFD). It is submitted that this judgment is not an isolated, separate issue from the current NAP framework, as it is indicative of an "abject failure"[57] by the Irish government to establish fundamental legal frameworks needed to safeguard water.

At **section 1.3** (page 12) of the draft NAP, it is explicitly stated that "*agriculture is the most common land use in Ireland…and consequently has been identified as the most prevalent pressure on water quality, impacting over 1,000 water bodies."* This admission is substantiated by data from the Environmental Protection Agency's (EPA) "*Water Quality in Ireland 2019-2024"* report[58] which documented a decline in surface water status.

This decline happened despite previous precedents of Nitrates Action Programmes in Ireland (discussed in **section 3.1.3** below), and this is reflective of the lack of legal safeguards in this respect. This issue is more severe when viewed in light of the EPA's "Evidence-based targeting of agricultural measures to reduce nitrogen in catchments" (2025) report[59] which stipulates that seven specific Catchments of Concern require significant nitrogen reductions, with Barrow needing to be reduced by 38%.

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[56] https://courthousenews.com/wp-content/uploads/2025/11/european-commission-v-ireland-judgment.pdf

[57] https://swanireland.ie/2025/11/landmark-eu-water-ruling-shows-systemic-and-abject-failure-of-irish-government-to-protect-water/

[58] https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/EPA-Water-Quality-in-Ireland-Report.pdf

[59] https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/Nitrate_Reductions_and_FLAG_Map_July2025_F01.pdf

Most importantly, the ECJ ruling reaffirms the longstanding position of environmental groups that Ireland's regulatory framework, in particular its NAP programmes are ill-equipped to handle the modern problems it faces. In relation to the draft NAP's explicit decision, outlined under **section 5.1** (at pages 81-82), to rule out further reductions in chemical nitrogen allowances by prioritising "forage deficits" over legally mandated water quality, is a perfect example of the approach that the ECJ had criticised in its seminal decision.

The draft NAP also puts a narrow and simplistic view on nutrients, while simultaneously ignoring the damage caused by unregulated physical alterations to water bodies, rendering it an incomplete mechanism that is unable to function properly. As such, when applying the ECJ ruling to this NAP, it is evident that Ireland's approach to water protection is systemically broken. We contend that by choosing to adopt this draft NAP in the immediate aftermath of such a ruling would not only be a profound legal and environmental disregard or responsibility, but also a larger indifference for the rule of EU law.

3.1.2 Contravention of the Precautionary Principle and the Primary Purpose of the Good Agricultural Practice (GAP) Regulations

It is our opinion that the sixth draft NAP exists in direct contravention with the precautionary principle[60] enshrined under Article 191[61] of the Treaty on the Functioning of the European Union (TFEU), which permits decision-makers to take protective measures when there is scientific uncertainty about potential harm to public health or the environment, without awaiting full scientific proof.

The primary purpose of the GAP Regulations, as stated in S.I. No. 113 of 2022, is to give effect to the Nitrates Directive with the aim "to prevent pollution of surface waters and groundwater from agricultural sources and to protect and improve water quality." The draft Sixth NAP, by its main objective of renewing a derogation that allows intensified farming practices known to contribute to water pollution, fundamentally undermines this statutory purpose. It shifts the regulatory focus from prevention to the management of pollution, a stance that is reactive, instead of being precautionary in nature.

The scientific evidence of harm is not uncertain in this respect; it is overwhelming and it in fact has been extensively well-accounted for within the draft NAP consultation document itself. The document concedes key features that demonstrate the failure of the current derogation regime. It acknowledges that agriculture, covering about 70% of the land is "the most prevalent pressure on water quality, impacting over 1,000 water bodies and it also makes mention to the fact that 70% of transitional waters such as estuaries and coastal lagoons are

[60] https://eur-lex.europa.eu/EN/legal-content/glossary/precautionary-principle.html

[61] https://eur-lex.europa.eu/eli/treaty/tfeu_2016/art_191/oj/eng

in unsatisfactory conditions, a direct consequence of nitrogen pollution from agricultural run-off.

In this context, seeking to renew a derogation that permits the higher nutrient loading in the very regions where water quality is most critically impaired is a direct inversion of the precautionary principle which demands that in the face of such clear evidence of environmental damage, the burden of proof must shift. It should be incumbent upon the proponents of the derogation to demonstrate that continued higher stocking rates will not result in further, irreversible harm, an evidentiary hurdle that the draft NAP has failed to provide proof of. Instead, it places reliance on possibility of new mitigation measures in offsetting the effects of the pollution, a move that does not form a legitimate basis for precautionary environmental policy.

Hence, the draft Sixth NAP, through its central aim of renewing the nitrates derogation is not a protective measure but a perpetuation of harmful activity which prioritizes economic gain over environmental longevity.

3.1.3 Unaddressed Shortcomings of the 5th NAP being carried over to the 6th NAP

Upon a comprehensive assessment of the draft 6th NAP, it is submitted that it fails to adequately address and rectify several systemic deficiencies from the 5th NAP, which was conducted between the years of 2022-2025. We are concerned that these unresolved issues will pose a greater difficulty in the latest NAP and risk continued non-achievement of Water Framework Directive (WFD) objectives.

The 5th NAP[62] relied heavily on advisory and incentivisation schemes to drive behavioural change. Whilst these function as valuable supplementary tools, national water quality trends demonstrate that these are insufficient as the primary mechanism in achieving WFD objectives. The 6th NAP continues this flawed approach by expanding these non-regulatory programmes without introducing a parallel and decisive strengthening of the regulatory baseline, particularly in Areas for Action and Catchments of Concern. This represents a failure to learn from the limited environmental effectiveness of the 5th NAP's overarching strategy.

3.2 Water Quality Assessment and Recommendations

3.2.1 Overview of Current Water Quality in Ireland

Ireland's most recent national assessment shows that water quality is continuing to deteriorate in many catchments despite ongoing programmes and investments. The Environmental Protection Agency's *Water Quality in Ireland*

[62] https://www.gov.ie/en/department-of-housing-local-government-and-heritage/publications/fifth-nitrates-action-programme-2022-2025/

2019–2024 report concludes that excess nutrients principally nitrates and phosphorus from agriculture and wastewater together with hydromorphological pressures, remain the dominant pressures on freshwater and marine ecosystems.[63] The Draft Sixth Nitrates Action Programme (NAP 2026–2029) rightly recognises that agriculture is the predominant land use in Ireland (~70% of the land area) and is a significant pressure on over 1,000 water bodies. Current measures have not been sufficient to halt or reverse the decline in water quality.[64]

The principal pathways for nitrates entering waters in Ireland are well established: diffuse leaching from intensively managed grasslands via fertiliser and slurry application, surface run-off and erosion particularly during heavy rainfall, and point discharges from sewage infrastructure and domestic waste systems.[65] [66] Monitoring data show high nitrate concentrations (above guideline levels) at a large fraction of river monitoring sites. Nitrate concentrations were reported as too high at 44% of monitored river sites in the EPA assessment, with clear regional patterns corresponding to intensive livestock production in the east and south-east.[33] [34] Scientific studies of Irish pasture-based systems emphasise that grazing, soil type, weather extremes, and manure management jointly determine nitrate leaching rates. Therefore, standard mitigation measures are unlikely to be effective without spatial targeting.[35] [36]

Ireland is already experiencing significant ecological and socio-economic consequences from sustained nitrate pollution. The most recent evidence shows that these pressures are intensifying rather than easing. EPA monitoring confirms that nitrate concentrations remain above acceptable levels at around 44% of river sites, with the greatest impacts occurring in the south-east and east where intensive grassland agriculture is most concentrated.[33] [35] These elevated nutrient loads are directly linked to the deterioration of several major catchments. In the **Slaney**, **Suir**, and **Barrow–Nore** river systems, persistent nutrient enrichment has contributed to reduced ecological status, algal proliferation, and the gradual decline of fish and invertebrate populations. The **2023 harmful algal bloom in Lough Neagh**, which resulted in widespread ecological damage and significant

[63] Environmental Protection Agency (EPA) (2025) *Water Quality in Ireland 2019–2024*. Wexford: EPA. Available at: https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/water-quality-in-ireland-2019-2024.php (Accessed: 27 November 2025).

[64] Department of Housing, Local Government and Heritage (DHLGH) (2025) *Draft Sixth Nitrates Action Programme 2026–2029.* Dublin: DHLGH.

[65] Environmental Protection Agency (EPA) (2024a) *Nitrates: Article 10 Report for Ireland 2020–2023.* Wexford: EPA. Available at: https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/Nitrates-Article-10-Report-for-Ireland-2020-2023.pdf (Accessed: 27 November 2025).

[66] Murphy, D.J. (2024) 'Nitrate leaching on Irish grassland dairy farms: A review', *Journal of Agricultural Science & Technology.* Available at: https://www.sciencedirect.com/science/article/pii/S1161030123003106 (Accessed: 27 November 2025).

socio-economic disruption, provides a clear illustration of how nutrient pressures, once established, can destabilise entire freshwater ecosystems.[67] [68]

Groundwater bodies are also showing increasing vulnerability, with several rural aquifers in the south-east recording nitrate concentrations that are approaching or exceeding drinking-water thresholds, thereby elevating risks for households dependent on private wells.[69] Taken together, these case studies demonstrate that nitrate pollution is not a marginal or emerging issue, but a well-documented and escalating pressure across Irish waters. The persistence of these trends underscores the need for targeted, enforceable, and scientifically grounded measures within the NAP if Ireland is to prevent further ecological decline and fulfil its obligations under the Nitrates Directive and Water Framework Directive.

3.2.2 Key critiques of the Draft Sixth NAP related to Water Quality

Although the Draft Sixth NAP acknowledges the scale of Ireland's water quality crisis, it falls short of providing the level of ambition and precision required to reverse ongoing declines. To ensure that agricultural and wastewater pressures are effectively addressed, ZWAI highlights the following key areas where the NAP requires substantial strengthening.

1. **Insufficient targeting of critical source areas (CSAs):** Evidence from catchment-scale studies shows that nitrate losses are highly spatially heterogeneous, for example relatively small "hotspot" areas (e.g. shallow soils, drained peats, and compacted farm tracks) account for disproportionate losses.[35] [36] The Draft NAP contains measures that are largely national or sector-wide but does not put adequate emphasis on mandatory mapping and action on CSAs within catchments, nor on prioritising measures where they will deliver the largest water quality benefit.[34]

2. **Over-reliance on advisory and voluntary measures:** While advisory supports and grant-funded capital measures (e.g. for slurry storage) are important, the evidence from Ireland and the UK suggests that voluntary

[67] Reid, N. et al. (2024) 'Unprecedented harmful algal bloom in Lough Neagh and implications for freshwater management', *Environment International*. Available at: https://www.sciencedirect.com/science/article/pii/S0160412024005208 (Accessed: 27 November 2025).

[68] Environmental Protection Agency (EPA) (2024b) *State of the Environment Report 2024.* Chapter 8: Water. Wexford: EPA. Available at: https://epawebapp.epa.ie/ebooks/soe2024/203/ (Accessed: 27 November 2025).

[69] EPA & Health Service Executive (HSE) (2023) *Nitrate and Nitrite in Drinking Water: Joint Position Paper.* EPA/HSE. Available at: https://www.hse.ie/eng/services/list/1/environ/water/epa-and-hse-joint-position-paper-on-nitrate-and-nitrite-in-drinking-water.pdf (Accessed: 27 November 2025).

uptake alone will not achieve the reductions required.[70] [71] Where inspections and compliance have been weak, agricultural pressures have continued to drive water quality decline. The NAP needs clearer, enforceable standards (e.g. for nutrient application and manure storage) with proportionate enforcement mechanisms.

3. **Inadequate integration with wastewater and urban sources:** The EPA explicitly identifies poorly treated sewage (urban wastewater treatment plants, septic systems, storm overflows) as major contributors to nutrient and contaminant loads.[33] The Draft NAP focuses on agricultural sources (appropriately) but does not set out a coherent cross-sectoral approach that ensures wastewater upgrades and urban runoff measures proceed in parallel with agricultural reform.

4. **Weak monitoring and evaluation framework:** Water-quality monitoring remains overly reliant on low-frequency grab sampling despite international evidence showing that most nutrient export occurs during short-duration storm events. Research from the UK and Denmark demonstrates that high-frequency sensors capture 80–90% of nitrate pulses that monthly samples fail to detect.[72] To meet WFD objectives and provide timely information for adaptive management, Irish high-risk catchments should incorporate continuous or near-continuous nitrate and turbidity monitoring. These sensors can identify pollution episodes in real time, improve understanding of catchment behaviour and support transparent public reporting. Robust progress requires catchment-scale, high-frequency monitoring and a clear logic for evaluating which delivers real change. The Draft NAP needs to commit to strengthened monitoring (including groundwater and smaller headwater streams), rapid reporting of outcomes, and adaptive management based on those results.[34] [38]

5. **Insufficient attention to climate interactions:** Increasing frequency of extreme rainfall events due to climate change will exacerbate nutrient run-off and increase legacy nitrate mobilisation. The NAP should explicitly

[70] European Environment Agency (EEA) (2022) *'Cross-cutting story 4: Nutrients', in Towards a zero pollution future — insights and stories.* EEA, Copenhagen. Available at: https://www.eea.europa.eu/en/analysis/publications/zero-pollution/cross-cutting-stories/cross-cutting-story-4-nutrients (Accessed: 27 November 2025).

[71] Greenpeace (2023) *Nitrate pollution in water: a European plague* [briefing]. Greenpeace EU. Available at: https://www.greenpeace.org/eu-unit/reports/nitrates-brief/ (Accessed: 27 November 2025).

[72] Outram et al. (2016). "High-frequency nutrient monitoring captures pollution pulses missed by monthly sampling." *Science of the Total Environment.*

incorporate climate resilience into its design (EEA, 2022; Madjar et al., 2024).[40] [73]

3.2.3 Practical Recommendations for Water Quality

To ensure the NAP reflects scientific evidence and responds effectively to the scale of the challenge, ZWAI recommends the following improvements and additions:

- **Mandatory identification and management of Critical Source Areas (CSAs):** Require farm-level mapping (using soil, slope, hydrology and land-use data) to identify likely hotspots of nitrate loss and mandate targeted mitigation there (e.g. buffer strips, constructed wetlands, changed slurry application timing).
- **Tighter enforceable nutrient management rules:** Set clear, legally binding limits on nitrogen application rates (accounting for soil type and crop need), slurry spreading windows, and minimum slurry-storage capacity per stocking rate and match these with strengthened inspection and graduated penalties for non-compliance.
- **Invest in and mandate nature-based solutions in priority catchments:** Water bodies require increased natural retention capacity to slow hydrological responses and intercept nutrient flows. The NAP should expand the use of nature-based solutions such as riparian buffer restoration, targeted wetlands, re-wetted riparian zones and controlled drainage in arable systems. European case studies demonstrate that well-designed wetlands can reduce nitrate loads by 25–50%, depending on landscape position and hydraulic residence times.[74] Such measures build climate resilience, enhance biodiversity and support the principles of pollution prevention central to ZWAI.
- **Integrate wastewater and agricultural policies:** Develop a cross-departmental implementation plan so wastewater infrastructure upgrades (storm overflow reduction, urban runoff controls, onsite system replacement) complement agricultural interventions within the same catchments.
- **Strengthen monitoring, transparency and adaptive management:** Expand routine monitoring (surface water, groundwater, smaller tributaries), publish near-real-time progress indicators at catchment level,

[73] Madjar, R.M., et al. (2024) 'Nutrient Water Pollution from Unsustainable Patterns of Agricultural Practices', *Water 16*(21):3146. Available at: https://www.mdpi.com/2073-4441/16/21/3146 (Accessed: 27 November 2025).

[74] Hoffmann et al. (2012). "Wetlands for nitrogen reduction: effectiveness across Europe." *Ecological Engineering.*

and require periodic (e.g. annual) public reviews that trigger additional measures if targets are not being met.

- **Incorporate climate resilience:** Require that mitigation measures account for changing precipitation regimes and explicitly model the effects of extreme rainfall on nutrient mobilisation.
- **Link NAP actions to CAP conditionality and public funding:** Ensure that CAP payments and agri-environment funding are conditional to demonstrable nutrient management and direct funding toward high-impact solutions (e.g. slurry storage, precision fertilisation, constructed wetlands).

The evidence is clear: agriculture is the dominant driver of nitrate pollution in Ireland's waters, and existing measures have not yet halted water quality decline. The Draft Sixth NAP contains some important proposals, but without stronger targeting of critical source areas, legally enforceable nutrient controls, integration with wastewater action and a robust monitoring and adaptive framework, it will be insufficient to protect freshwater and marine ecosystems. The NAP must be revised to prioritise evidence-based, enforceable, and catchment-focused interventions if Ireland is to meet its obligations under the Nitrates Directive and the Water Framework Directive and to restore the ecological health of its waters.

3.3 Advocating a Risk-based NAP Grounded in Geology and Soil Vulnerability

3.3.1 Risk-based NAP Framework

Ireland's nitrate trends continue to deteriorate in several southern and southeastern catchments, with EPA monitoring showing that many of the most impacted waterbodies occur in areas dominated by free-draining soils and karstified limestone aquifers.[75] In such landscapes, nitrate moves rapidly through the subsurface with limited natural attenuation, ultimately reaching groundwater and baseflow-fed rivers. This pattern of vulnerability illustrates why a uniform approach cannot achieve the objectives of the Nitrates Directive or the Water Framework Directive (WFD).

The forthcoming NAP should therefore adopt a risk-weighted framework grounded in geology, soil vulnerability and landscape hydrology. Catchments underlain by permeable soils or karst conduits require more protective nutrient limits and stronger slurry-spreading controls, while heavier soils with greater denitrification capacity present different risk profiles. A tailored approach focused on critical source areas (CSA), as briefly noted in the previous section, is

[75] EPA (2024). *Water Quality in 2023*. Accessible at: https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/EPA-Water-Quality-Indicator-Report-2023-web-11June2024.pdf

essential to prevent pollution at source and to align nutrient management with the intrinsic sensitivities of Irish landscapes.

Ireland's karst groundwater system represents a critical vulnerability within national water protection policy. Karst aquifers allow rapid nutrient movement and possess very limited natural filtration capacity. Once contaminated, these systems can take decades to recover. Strengthening groundwater monitoring, increasing sampling frequencies at karst springs and restricting high-risk activities in vulnerable zones are therefore essential steps for compliance with both EU groundwater and surface-water obligations.

3.3.2 Soil Health

Current soil testing practices focus largely on phosphorus and potassium, yet the behaviour of nitrogen in soil is determined primarily by soil structure, aeration, organic matter content and hydrological pathways. Teagasc research highlights that further reductions in chemical nitrogen allowances will be ineffective unless soil structural function is improved first.[76]

Scientific studies demonstrate that compaction reduces macroporosity, restricts air exchange and increases anaerobic microsites; this shift in soil conditions alters nitrogen cycling and leads to elevated denitrification losses and higher nitrous oxide emissions.[77] Compacted soils also absorb less rainfall, resulting in greater overland flow and enhanced mobilisation of nitrate during storm events. For these reasons, soil-health evaluation within the NAP should expand to include bulk density, infiltration capacity, organic matter levels, aggregate stability and susceptibility to compaction. These indicators provide a realistic basis for nutrient planning and reflect the evolving standards proposed under EU soil-monitoring initiatives.

3.3.3 Slurry production, storage and application

Recent Teagasc findings indicate that slurry production on dairy farms is substantially underestimated within current regulations.[78] Due to increased milk yields and longer winter housing periods, existing storage requirements do not

[76] Teagasc (2025). *An environmental and economic assessment on the impact of possible reductions in the maximum chemical nitrogen allowances for all grassland stocking rates.* Accessible at: https://teagasc.ie/wp-content/uploads/uploads/media/website/publications/2025/An-environmental-and-economic-assessment-on-the-impact-of-possible-reductions-in-the-maximum-chemical-nitrogen-allowances-for-all-grassland-stocking-rates.pdf

[77] Ball, B. C. (2013). Soil structure and greenhouse gas emissions: a synthesis of 20 years of experimentation. *European Journal of Soil Science, 64*(3), 357-373. DOI: https://doi.org/10.1111/ejss.12013

[78] Teagasc (2025). *Slurry and dairy soiled water volume estimates – Final Data Summary.* Accessible at: https://teagasc.ie/wp-content/uploads/uploads/media/website/publications/2025/Slurry-and-dairy-soiled-water-volume-estimates.pdf

align with modern production systems. As a result, many farms, particularly in derogation, are likely to face unavoidable early- or late-season slurry spreading, often at times when soils are saturated or rainfall risk is high. Inadequate storage capacity is therefore a structural cause of diffuse pollution. Government investment schemes such as the Targeted Agricultural Modernisation Scheme (TAMS) should prioritise farms located in critical source areas where storage deficits are most environmentally consequential. Incentivising covered storage is essential, as covering tanks reduces rainfall dilution, improves slurry nutrient density and lowers ammonia emissions. Aligning state investment with catchment water-risk mapping would maximise environmental returns from public expenditure.

Teagasc's methodology for optimising slurry redistribution provides a scientifically robust approach to reducing chemical nitrogen dependency and preventing nutrient hotspots on intensively stocked milking platforms.[79] Concentrating slurry on small land parcels elevates the risk of nitrate losses, especially in wet, sloped or karst landscapes where nutrient mobilisation is high. Incorporating this redistribution framework into the NAP would ensure that organic nutrients are applied according to soil capacity and crop demand across the full farm holding. Digital verification through the National Fertiliser Database can strengthen oversight and support catchment-scale nutrient accounting. Improved slurry allocation not only reduces chemical fertilizer use but also enhances overall nutrient-use efficiency and lowers water-pollution pressure.

Calendar-based slurry-spreading rules are increasingly misaligned with climate realities. Weather volatility, including intense rainfall, soil saturation and freeze–thaw cycles, has made fixed dates a blunt and often ineffective regulatory instrument. A climate-responsive spreading framework using rainfall forecasts, soil moisture indices, temperature thresholds and saturation risk indicators would improve both environmental protection and practical farm decision-making.

3.3.4 Winter cover crops

In arable systems, nitrate losses primarily occur after harvest when mineralised nitrogen is left unused through the winter. Numerous studies show that winter cover crops can reduce nitrate leaching by up to 90%, depending on soil type and crop species.[80] [81] [82] The NAP should therefore recognise that in arable

[79] Teagasc (2025). *Improving slurry nutrient distribution on dairy farm holdings.* Accessible at: https://teagasc.ie/publications/improving-slurry-nutrient-distribution-on-dairy-farm-holdings/

[80] Thapa, R., Mirsky, S.B. & Tully, K.L. (2018). Cover Crops Reduce Nitrate Leaching in Agroecosystems:A Global Meta-Analysis. *Journal of Environmental Quality, 47*(6), 1400-1411. DOI: https://doi.org/10.2134/jeq2018.03.0107

[81] Hanrahan, B.R., Tank, J.L., Christopher, S.F., Mahl, U.H., Trentman, M.T. & Royer, T.V. (2018). *Agriculture, Ecosystems & Environment, 265*, 513-523. DOI: https://doi.org/10.1016/j.agee.2018.07.004

[82] Constantin, B., Mary, B., Laurent, F., Aubrion, G., Fontaine, A., Kerveillant, P. & Beaudoin, N. (2010). Effects of catch crops, no till and reduced nitrogen fertilization on nitrogen

landscapes, winter cover crops, rather than fertiliser-rate reductions alone, provide the greatest environmental benefit. Establishing robust cover over winter months is the most effective and evidence-based measure to minimise leaching.

Evidence indicates that abrupt reductions in chemical nitrogen allowances, introduced without corresponding improvements in soil structure, slurry utilisation or storage capacity, can depress grass production and increase reliance on imported feeds.[45] A phased reduction strategy linked to verified soil-health improvements, adoption of clover–grass swards and enhanced nutrient-efficiency practices would deliver more stable and sustainable outcomes while maintaining farm resilience.

Overall, strengthening the NAP through geoscience-led risk assessment, improved soil-function monitoring, enhanced slurry management, modernised water-quality monitoring and the strategic use of nature-based solutions would significantly increase Ireland's capacity to meet the objectives of the Nitrates Directive. These reforms align closely with ZWAI's core principles of preventing pollution at source, improving resource efficiency and ensuring that nutrient cycles operate in harmony with ecological limits rather than at their expense.

3.4 Using Mulch and Compost as a Strategy to Smart Circularity – with Hemp as a Principal Component Crop

Brief overview:

- **Expand industrial hemp cultivation** as a low-input, soil-enhancing, and climate-positive crop.
- **Utilise hemp biomass as nitrogen-retentive mulch** to prevent soil erosion, suppress pests, and reduce plant diseases by limiting soil-splash contamination while maintaining stable soil moisture.
- **Combine hemp mulch with natural compost inputs** - a natural source of nitrogen - to build long-term soil fertility and reduce reliance on synthetic fertilisers.
- **Shift from intensive agriculture to localised horticulture**, supported by transparent micro-grants and a zero-tax policy on certified organic inputs.
- **Promote plant-based food systems** modelled on successful European examples, such as Amsterdam's transition to healthier, more sustainable diets (**section 3.4.8** below).

leaching and balance in three long-term experiments. *Agriculture, Ecosystems & Environment 135*(4), 268-278. DOI: https://doi.org/10.1016/j.agee.2009.10.005

A combined strategy of hemp biomass[83] used as mulch and compost-based soil nutrition creates a fully circular nutrient cycle that significantly reduces the need for synthetic nitrogen fertilisers, while transforming organic waste from a disposal challenge into a valuable resource for soil fertility.[84] [85]

3.4.1 Expand industrial hemp cultivation as a low-input, soil-enhancing, and climate-positive crop

The first and most impactful step Ireland should take is to scale up industrial hemp cultivation nationally. Hemp delivers a unique combination of environmental, economic, and climatic benefits that few other crops can match. It is a naturally low-input crop that grows vigorously with minimal or zero synthetic nitrogen, thrives on residual soil nutrients, and improves soil structure through deep rooting and rapid biomass accumulation.[86]

Expanding hemp production would immediately reduce nutrient pressures on waterways, support compliance with the Nitrates Directive, and provide farmers with a viable alternative to high-fertiliser, high-emission systems. At the same time, hemp is one of the most effective field crops for carbon sequestration, locking in substantial biomass above and below ground within a single season - directly contributing to Ireland's Paris Agreement and ESR emission-reduction obligations.[87]

[83] Stulpinaite, U. , Tilvikiene, V. & Doyeni, M.O. (2024). Decomposition of Hemp Residues in Soil as Facilitated by Different Nitrogen Sources. *Agriculture, 14*(3), 508. DOI: https://doi.org/10.3390/agriculture14030508

[84] Teagasc (2020). *Major & Micro Nutrient Advice For Productive Agricultural Crops.* Accessible at: https://teagasc.ie/wp-content/uploads/uploads/media/website/publications/2020/Major-and-Micro-Nutrient-Advice-for-Productive-Agricultural-Crops-2020.pdf

[85] Mecione, U., Doyeni, M.O. & Tilvikiene, V. (2025). Optimizing Hemp (Cannabis sativa L.) Residue Management: Influence on Soil Chemical Properties Across Different Application Technologies. *Agronomy, 15*(5), 1121. DOI: https://doi.org/10.3390/agronomy15051121

[86] Teagasc (2013). Producing Biomass from Hemp (Cannabis sativa). Accessible at: https://teagasc.ie/wp-content/uploads/2025/05/5788_ProducingBiomassFromHemp.pdf

[87] EIHA (2023). *Study shows hemp captures as much carbon as forests when used for construction materials*. Accessible at: https://eiha.org/wp-content/uploads/2023/07/Press-release-Carbon-Storage-in-Hemp-and-Wood-raw-materials-for-Construction-Materials.pdf

Economically, hemp creates new value chains - from construction materials and biocomposites to textiles, mulch, animal bedding[88], and biochar[89] offering diversified rural income without adding nutrient pollution to the environment.[90]

By expanding industrial hemp cultivation, Ireland positions itself at the forefront of a regenerative, circular bioeconomy while relieving pressure on water quality, reducing fertiliser dependency, and lowering compliance costs related to missed climate targets. Failure to meet ESR targets could cost the State an estimated €8–€26 billion by 2030 in compliance payments.[91] This strategy helps avoid those penalties by sequestering carbon through hemp cultivation, reducing reliance on synthetic nitrogen fertilisers, lowering agricultural emissions, and unlocking additional environmental and economic benefits associated with a regenerative hemp-based economy.

3.4.2 Utilise Hemp Biomass as Nitrogen-Retentive Mulch to Prevent Soil Erosion, Suppress Pests, and Reduce Plant Diseases

Hemp biomass can be applied as a nitrogen-retentive mulch that delivers multiple soil and crop protection benefits. When left on the soil surface or lightly incorporated, hemp mulch helps retain soil nitrogen, reducing nutrient leaching and improving the efficiency of residual soil nutrients. Its lignocellulosic structure stabilises the soil, preventing erosion, maintaining moisture levels, and moderating soil temperature, which collectively supports healthy plant growth.[53]

The mulch also suppresses pests and reduces plant diseases by limiting soil-splash contamination - a key vector for many foliar pathogens. Hemp produces natural chemical compounds, including terpenoids, that inhibit weed growth and some pest populations, further reducing reliance on chemical inputs.[92]

In addition, hemp's deep root system improves soil porosity, encourages microbial activity, and enhances nutrient cycling, making it an ideal crop for regenerative farming practices. Returning hemp residues to the field has been

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88 Teagasc (2020). *Industrial Hemp Production - Fact sheet.* Accessible at: https://teagasc.ie/wp-content/uploads/media/website/rural-economy/rural-development/diversification/9-Diversification-Industrial-Hemp.pdf

89 Amaducci, S. (2017). *Final Report Summary - MULTIHEMP (Multipurpose hemp for industrial bioproducts and biomass)*. Accessible at: https://cordis.europa.eu/project/id/311849/reporting

90 Munster Hemp (2025). *Building with Hemp: Unlocking Sustainable Construction in Ireland.* Accessible at: https://munsterhemp.ie/hemp-in-sustainable-construction.php

91 Irish Fiscal Advisory Council (2025). *A colossal missed opportunity: Ireland's climate action and the potential costs of missing targets.* Accessible at: https://www.fiscalcouncil.ie/wp-content/uploads/2025/03/Irelands-climate-action-and-the-potential-costs-of-missing-targets.pdf

92 Kaur, N., Kumar, A., Malik, T., Girdhar, M., Singh, M., Singh, R., Tariq, M. & Mohan, A. (2025). Herbicide use and weed management strategies in hemp cultivation. *Journal of Cannabis Research, 7*(27). DOI: https://doi.org/10.1186/s42238-025-00280-0

shown to increase soil organic carbon and support a long-term regenerative nutrient cycle.[93]

By integrating hemp mulch into Irish agricultural systems, farmers can maintain soil fertility, reduce dependence on synthetic fertilisers, control erosion, and limit crop disease and pest pressures - all while supporting a low-carbon, circular approach to soil management.

3.4.3 Combine Hemp Mulch with Natural Compost to Strengthen Long-Term Soil Fertility

The integration of hemp mulch with natural compost creates a fully circular nutrient system, combining nitrogen retention with slow-release nutrient supply. While hemp mulch preserves existing soil nitrogen, compost provides a natural source of additional nitrogen, supporting microbial activity, humus formation, and long-term soil fertility. This combination forms a regenerative loop, maintaining soil health, closing nutrient cycles, and reducing or even eliminating the need for synthetic fertilisers.[54]

It is well-known by now that compost improves soil structure, increases organic matter, and enhances water retention. When used together with hemp mulch, the two interventions synergistically boost soil fertility, increase microbial diversity, and protect crops from nutrient losses.[56]

This approach not only enhances agroecological performance but also transforms organic waste management from a disposal challenge into a valuable resource for productive farming. By combining hemp mulch and compost,[54] Irish farmers can adopt alow-input, regenerative strategy that reduces chemical fertiliser dependence,[94] improves resilience to climate variability, and aligns with national and EU climate and agricultural policies.[53]

3.4.4 Shift from intensive agriculture toward localised horticulture

The transition from high-input, intensive agriculture to localised horticulture delivers substantial environmental and socio-economic benefits. Local horticulture systems reduce nutrient runoff, lower dependence on synthetic fertilisers, improve soil health, and enhance resilience to climate variability –

[93] HCS (2025). *Hemp Carbon Standard: Regen AG Methodology (HCS - RAM) Methodology For CO2 Removal V4.* Accessible at: https://hempcarbonstandard.org/wp-content/uploads/2025/01/HCS-Regen-Ag-Methodology-Final-V4.pdf

[94] Sicignano, M., Beleggia, R., Del Piano, L., Enotrio, T., Suriano, S., Raimo, F. & Trono, D. (2025). *Plants (Basel), 14*(10), 1519. DOI: https://doi.org/10.3390/plants14101519

aligning with and surpassing the EU Farm to Fork Strategy's goals for sustainable food production.[95]

Micro-grants and supportive policy tools play a critical role in enabling this transition. By reducing financial barriers for small farmers, community growers, and new entrants, micro-grants encourage uptake of regenerative, low-input, circular food systems. Offering zero-tax incentives on certified organic inputs (such as compost, organic seeds, and soil conditioners) further removes economic obstacles and supports environmentally responsible farming - an important consideration given rising input costs documented by Teagasc.[96]

To be effective and equitable, these supports must be delivered with transparency, clarity, and minimal bureaucracy. Simplified application processes and easily verifiable eligibility criteria are essential to ensure that smaller growers – rather than only large commercial actors (who can allocate personnel to handle the associated bureaucratic requirements) – can realistically access the supports and manage the complex, time-consuming grant application processes.

3.4.5 Supporting Women in Horticulture and the Circular Bioeconomy

Women are significantly under-represented in Irish agriculture, accounting for only about 13% of farm holders,[97] despite playing a crucial role in diversified, community-based, and sustainability-oriented farming systems. The EU and Irish Government have explicitly recognised women as an untapped driver of rural innovation, climate action, and regenerative agriculture, with CAP 2023–2027 encouraging Member States to improve gender balance, support women-led enterprises, and expand opportunities for inclusion (European Parliament, Women in EU Agriculture & CAP Reform).

Localised horticulture, micro-grants, and circular bioeconomy models - such as hemp-based systems – offer lower barriers to entry, smaller land requirements, and more flexible structures that particularly benefit women, single parents, and newcomers to agriculture. Ensuring equal access to grants, training, and organic input incentives will not only enhance gender equity but will strengthen rural resilience and innovation.

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[95] European Commission (n.d.). *Sustainable food production.* Accessible at: https://food.ec.europa.eu/horizontal-topics/farm-fork-strategy/sustainable-food-production_en

[96] Teagasc (2024). *Horticulture Crop Input Prices 2024.* Accessible at: https://teagasc.ie/publications/horticulture-crop-input-prices-2024-php/

[97] Department of Agriculture, Food and the Marine (2025). *Women in Agriculture.* Accessible at: https://www.gov.ie/en/department-of-agriculture-food-and-the-marine/publications/women-in-agriculture/

3.4.6 A Regenerative, Community-Led Food System

When paired with hemp-based soil strategies (hemp mulch + compost), localised horticulture contributes to biodiversity restoration, long-term soil fertility, improved water quality, and circular nutrient cycles. This model supports a place-based, community-led bioeconomy consistent with LEADER principles and CAP objectives.[98]

3.4.7 Embedding Hemp Mulch and Compost as a Strategy to Achieve Circularity in the National Strategy for Horticulture 2023–2027

To support the transition towards local horticulture, the hemp-mulch + compost circularity model should be embedded as a core pillar of Ireland's *National Strategy for Horticulture 2023–2027*. This regenerative, biologically driven nutrient-management system directly advances several of the Strategy's priority objectives, including reducing reliance on chemical inputs, improving soil health, enhancing climate resilience, increasing sustainable domestic production, and lowering the environmental footprint of Irish horticulture.

By empowering local and organic horticultural producers, Ireland can reduce dependency on synthetic fertilisers, thereby cutting nitrogen pollution and protecting water quality. Additionally, local food production shortens supply chains, reduces carbon emissions, and increases food security and resilience, particularly in rural communities. Supporting small growers with grants enables them to invest in sustainable infrastructure, such as polytunnels, irrigation, and renewable energy, under a just transition to regenerative farming. This approach could position Ireland as a leader in circular nutrient systems across Europe while ensuring that the National Strategy for Horticulture 2023–2027 delivers on its potential to transform the sector into a climate-positive, resilient, and economically diversified cornerstone of Ireland's bioeconomy.

Concrete measures to support this transition:

- **Make the hemp-mulch and compost model a formal action in the National Strategy for Horticulture** – include an implementation timeline, KPIs (reduction in synthetic N use / % of horticulture under circular management), and a national rollout plan.
- **Use the 2026 Commercial Horticulture Investment Scheme** to fund infrastructure for on-farm composting and mulch processing (up to **50%** grant aid).

[98] European Parliament (2025). *The common agricultural policy strategic plans regulation - Fact sheet*. Accessible at: https://www.europarl.europa.eu/factsheets/en/sheet/294068/uredba-o-strateskih-nacrtih-skupne-kmetijske-politike

- **Scale-up the Organic Farming Scheme (OFS)** to prioritise horticulture and hemp-based circular systems – OFS provides per-ha payments to support conversion to organic/low-input systems.[99]
- **Offer targeted Innovation & Diversification Grants** (up to **60%** for organic growers) for composting systems, on-farm mulch production, small-scale processing, and value-chain development.[100]
- **Ring-fence Budget funding for horticulture transition** (match Budget 2025/2026 allocations and expand support for training, labour, and small grants for community groups).
- **Create a simple, transparent micro-grant mechanism** for community growers and women-led projects (simple forms, quick decisions, and support structures designed to remove bureaucracy altogether).
- **Require pilot catchment programmes** where hemp-mulch + compost is trialled in high-risk nitrate zones to measure water quality benefits, carbon sequestration, and farmer economics. Use EPA catchment science & monitoring frameworks.[101] [102]
- **Provide technical & advisory support** via Teagasc and local horticulture advisory services for training on hemp agronomy, composting, mulch management, and monitoring.
- **Incorporate hemp carbon & accounting protocols** into national carbon reporting and support access to carbon payments where appropriate.[57] [63]
- **Embed regulatory change:** phase-out timetable for synthetic fertilisers in horticulture, linked to grant eligibility and compliance monitoring under the Nitrates Action Programme.
- **Market & value-chain support** to ensure economic viability (construction, textiles, animal bedding, biochar)

In combination with hemp-based nutrient strategies, this shift would foster a diverse, resilient, and circular agricultural system that aligns with national climate, biodiversity, and water quality goals.

[99] Department of Agriculture, Food and the Marine (2025). *Organic Farming Scheme.* Accessible at: https://www.gov.ie/en/department-of-agriculture-food-and-the-marine/services/organic-farming-scheme/

[100] Irish Organic Association

[101] Catchments & monitoring

[102] Environmental Protection Agency

3.4.8 Promote Plant-Based Food Systems, Modelled on Successful European transitions such as Amsterdam's shift to healthier, low-impact diets

Ireland should actively support a national transition toward plant-based food systems, drawing on proven European examples and on the advice provided in the EAT-Lancet reports quoted in **sections 1.9.1** and **1.9.2** above. One of the best of these European schemes, and one which could easily be implemented in any of Ireland's cities, is Amsterdam's city-wide Food Strategy, which aims to increase the share of plant-based protein in residents' diets from 40% to 60% by 2030.[103] Amsterdam demonstrates that coordinated policy, education, and public procurement measures can rapidly shift consumer behaviour, reduce nutrition-related disease risk, and significantly lower agriculture-related emissions.

A similar transition in Ireland would address the unsustainable nutrient and pollution burdens highlighted in Teagasc's Nitrates Modelling Report (2021)[104] which shows that current consumption and production patterns place extreme pressure on soils, water bodies, and catchments. The report demonstrates that Ireland's high reliance on livestock-based systems drives disproportionate nitrogen loading and slurry-related pollution, with nutrient surpluses concentrated in vulnerable catchments. These "nutrient-intensive dietary patterns" are structurally incompatible with achieving Nitrates Directive and Water Framework Directive compliance, as well as with national climate obligations.

Shifting toward a more plant-based national diet -– supported by local horticulture, community growing, school catering reform, and regenerative circular systems like the hemp-mulch + compost model - would reduce emissions across the food system, lower water-quality pressures identified by Teagasc, diversify horticultural output and reduce dependency on imports, support public health improvements, and align Ireland with EU Farm to Fork targets for sustainable consumption.

This food-systems transition should be embedded across public procurement, climate policy, the National Strategy for Horticulture 2023–2027, and community support programmes, ensuring that dietary change complements agricultural transition and circular nutrient management reforms.

The strategy aligns with:

- **Eco-Schemes:** crop diversification, carbon-farming crops, soil protection, and organic practices.

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[103] https://www.amsterdam.nl/en/policy/sustainability/food-strategy/

[104] Teagasc (2021). *The Impact of Nitrogen Management Strategies within Grass Based Dairy Systems*. Accessible at: https://teagasc.ie/wp-content/uploads/uploads/media/website/publications/2021/Nitrates-Modelling-Final.pdf

- **AECMs:** mulching, composting, biodiversity measures, and reduced chemical inputs.
- **Organic Farming Scheme:** strengthened by introducing zero tax on certified organic inputs.
- **CAP's Farm to Fork Goals:** encouraging more plant-based diets, lowering environmental footprints, and creating resilient, healthy food systems.
- **LEADER & community-led rural development:** supporting community food growing, local food hubs, and place-based circular economies.
- **Paris Agreement & EU Effort Sharing Regulation (ESR):** supporting Ireland's legally binding obligation to reduce emissions in non-ETS sectors (including agriculture). Failure to meet ESR targets could cost the State an estimated **€8–€26 billion by 2030**[61] in compliance payments. This strategy helps avoid those penalties by sequestering carbon through hemp cultivation, reducing reliance on synthetic nitrogen fertilisers, lowering agricultural emissions, and unlocking additional environmental and economic benefits associated with a regenerative hemp-based economy.

3.5 Business-as-usual Versus Long-Term Thinking And Sustainability Through Profit

This section broadly evaluates and discusses why water protection measures have failed to date and what needs to be done to move forward from the business-as-usual (BAU) approach, and towards a sustainability-through-profit farming model.

The current Programme for Government 2025 seeks to extend the Nitrates Derogation without a clear plan to phase it out within an agreed timeframe. This approach prioritises BAU over necessary change and innovation. While we recognise that change can be challenging for open-market businesses, including the farming sector, we must face the real challenges posed by climate change and biodiversity loss. Addressing these issues requires creative long-term thinking.

A lot of great work has been done through projects such as Teagasc's "Signpost Farm Sustainability Plan",[105] LAWPRO Catchments Support Fund,[106] Pollution

[105] https://teagasc.ie/environment/climate-change-air-quality/signpost-programme/signpost-explained/farm-sustainability-plan/

[106] https://teagasc.ie/news--events/daily/60-million-project-to-improve-water-quality-targeted-at-15000-farmers/#:~:text=%E2%80%9CThe%20health%20and%20quality%20of,with%20farmers%20on%20the%20ground.%E2%80%9D

Impact Potential Maps,[107] and the NPWS' habitat and species data[108] and Biodiversity Maps.[109] These are just a few of the creative, science-based initiatives that we commend. We advocate for more support from Government and from the Irish Farmer's Association (IFA) for these kinds of initiatives.

3.5.1 Diversifying income streams

Ireland is lucky to have retained the small family farming system, but this is changing rapidly towards larger, more commercial holdings. An opportunity presents itself to use this time of change for environmentally friendly farming; we must not let it go to waste.

The Land Commission broke up the British estate system, and this fragmentation has served us well. Our rural economy system is sometimes criticised by economists as being inefficient, but only for those who don't understand the value of people, nature, and the stewardship of ecosystems and food systems they provide. We propose the protection of the small-scale farming system by diversifying the farm income stream.[110]

Farmers manage and maintain ecosystem services that require support and valuation in monetary terms beyond what ACRES provides. The EU Circular Economy Water to Resource Directive should be utilised to establish farm-level or co-operative agricultural plants, enabling farmers to harvest their water and ammonia on-site and generate extra income. Unfortunately, Ireland is moving towards larger county- or regional-level systems where farmers won't benefit from this income. This move seems to be influenced by misconceptions regarding the viability of farm-scale agriculture.

The EU Carbon Removals and Carbon Farming (CRCF) Regulation (EU/2024/3012) addresses valuing carbon credits, enabling farmers to sell eco-services such as carbon sequestration to businesses through a digital online certificate. Carbon sequestration through nature-based services has been researched in the USA and EU. While our Government is focusing on conducting research in Ireland, it may be beneficial to explore EU-level collaboration to leverage existing scientific knowledge and proven systems, as a coordinated approach could enhance our understanding and effectiveness.

This secondary income stream could outperform intensive production by providing a base income and encouraging younger, small-scale farmers and the family-farm system to remain in place, while being supported by the EU Farming

[107] https://www.catchments.ie/water-quality-agriculture-pollution-impact-potential-maps-tool-guide-resources-areas-investigation/

[108] https://www.npws.ie/maps-and-data

[109] https://maps.biodiversityireland.ie/Map

[110] https://www.ifa.ie/wp-content/uploads/2025/02/IFA-Submission-on-Generational-Renewal-in-Farming.pdf

for Nature initiative. We encourage the Irish Government to embrace the opportunities presented by the EU and to work collaboratively towards mutual growth and benefit.

3.5.2 Biodiversity representation in the Sixth NAP

Another issue is that the biodiversity crisis is not properly addressed in Ireland's NAP. We have altered 99.99% of our lands—death by a thousand cuts. The bogs require large-scale restoration, yet there has been no significant progress in restoring cutaway bogs at scale.

Hills have been shaped by sheep from a wet Atlantic Temperate Rainforest to a neatly trimmed landscape.[111] Our green deserts of Irish monoculture have caused biodiversity loss over the past 50 years. Although the thinking of the time was sincere, a mindset change is needed. As smaller farms disappear and the average age of farmers rises, land prices encourage leasing and the formation of large estates, prioritising profit over conservation, which results in the destruction of natural habitats through land development and the reshaping of our geo-heritage.

The Office of Public Works (OPW) is continuously draining rivers to maintain peatlands as "improved lands for farming" (1950s direction), speeding up water flow and preventing the peatlands from acting as a buffer. Initiatives like Farmbionet[112] and Farming for Nature[113] are looking to restore peatland while OPW continues BAU. The EU has criticised Ireland for not adequately protecting peatlands, despite receiving EU support. The European Commission has backed Ireland in conserving peat bog habitats, but ongoing damage has persisted. This has resulted in a 2024 referral to the Court of Justice of the European Union (CJEU) due to Ireland's failure to safeguard these sites.

Initiatives like the LAWPRO Catchments Support Fund suggest farm-level geo-engineering to restore swales to riparian zones to slow water.[114] Let's use The Hare's Corner[115] and Native Tree Area (NTA) Scheme[116] to make these Riparian ways permanent and profitable, and connect nature along our rivers, aligning catchments with biodiversity.

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111 https://www.nativewoodlandtrust.ie/

112 https://farmbionet.eu/

113 https://www.farmingfornature.ie/

114 https://teagasc.ie/news--events/daily/60-million-project-to-improve-water-quality-targeted-at-15000-farmers/#:~:text=%E2%80%9CThe%20health%20and%20quality%20of,with%20farmers%20on%20the%20ground.%E2%80%9D

115 https://theharescorner.ie/

116 https://teagasc.ie/crops/forestry/grants/native-tree-area-scheme/

Other positive initiatives such as the River Basin Management Plan[117] and Pollution Impact Potential Maps[118] demonstrate how restoring geo-heritage features and implementing geo-forming measures, such as the creation of sinuous or meandering channels in rivers, can improve water quality by slowing water flow and preventing flooding.

3.5.3 Forward thinking regarding nutrient application

The EPA have done great work with the Nutrient Movement App,[119] and the use of these technologies is very effective in supporting farmers. Unfortunately, when the slurry reaches the farm gate or originates on the farm, there is no monitoring of flow rates. The application limit is arbitrary, with hilly areas where no slurry is applied being counted the same as silage lands. This can easily be addressed by tractor GPS and flow meter systems, which can assist farmers effectively.[120] The following recommendations are also made in regards to nutrient limits and slurry spreading:

- Monitoring of water systems and large rainfall events should be routine when applying slurry and inorganic NPK fertilisers.
- The slurry spreading season begins on 14th January, on water-saturated and slow-laden lands, possibly with frozen fields, which raises the question of whether slurry is truly regarded as a resource in Ireland or merely a waste product.
- Organic nutrient inputs, like inorganic ones, should adhere to growth patterns; for example, grass doesn't require nutrients in winter.
- Investing in innovation through the circular economy by removing solids to produce high-value compost, using anaerobic digestion to produce methane, and recovering phosphorus and potassium from farm effluent; the recovered methane can power farm machinery and generate electricity for farm use or for export to the national grid; and these processes offer additional income streams and will promoting diversification and sustainability.

In conclusion, the EU is looking to sequester carbon from the atmosphere and is investing significant money in this process as well as other nature-based farming initiatives. This money should go to the farming community to solve the problem

[117] https://www.gov.ie/en/department-of-housing-local-government-and-heritage/policy-information/river-basin-management-plan-2022-2027/

[118] https://www.catchments.ie/water-quality-agriculture-pollution-impact-potential-maps-tool-guide-resources-areas-investigation/

[119] https://www.gov.ie/en/department-of-agriculture-food-and-the-marine/press-releases/technical-notice-nutrient-movement-app/

[120] https://www.digi.com/blog/post/iot-based-environmental-monitoring

through regenerative farming and other initiatives mentioned previously. These initiatives need farm-level implementation, rather than further delay. Another Nitrates Derogation with no end point delays the long-term sustainability of the farmer as well as the farm.[121]

Finally, let's move away from business as usual (BAU) and let's embrace innovation, technology, and sustainability practices. Ireland should applaud positive initiatives and support implementation of these new systems with diversification of income, paving a bright future for small Irish farm families, living and farming with nature.

[121] https://www.independent.ie/farming/dairy/legacy-nitrogen-haunts-irish-soils-new-study-warns-water-quality-fix-wont-be-quick/a921378358.html

4. CONCLUDING SUMMARY AND KEY POINTS OF OUR OBSERVATIONS

1. The importance of this public consultation is underlined by the strong support given by Government Ministers to Ireland's derogation from the strict requirements of the EU Nitrates Directive.

2. If the European Commission supports Ireland's plea for continuing derogation, this country will remain the only EU Member State which is allowed to spread animal slurry on farmland at a rate which exceeds that permitted under the EU Nitrates Directive; and, in our submission, this can lead only to a continuation of poor water quality in streams, rivers and groundwater in areas where livestock farming is intensive.

3. The importance of this public consultation is further highlighted by the Judgment of the CJEU in case C-204/24; and, even though the Minister for Agriculture, Food and the Marine has agreed that demonstrating compliance with the Habitats Directive will be "*a massive undertaking, requiring a significant investment of time and resources"* to conduct environmental assessments, there is no indication in the current Programme for Government or in the budget that these resources will become available. Furthermore, the ECJ ruling reaffirms the longstanding position of Irish and international environmental organisations that Ireland's regulatory framework, in particular its NAP programmes, are ill-equipped to handle the modern problems which they are facing.

4. One of the key points of our submission is that the proposed draft Sixth Nitrates Action Programme (NAP), does not appear to provide the necessary changes in agricultural policy, strengthening of water pollution controls, and better monitoring and enforcement. We also noted that the draft NAP gives a narrow and simplistic view of nutrients, while simultaneously ignoring the damage caused by unregulated physical alterations to water bodies, making it an incomplete mechanism which is unable to function properly.

5. The sixth NAP is also one of a large number of EU and Irish Government policies which touch on, or have an importance influence on, agriculture; yet there is very little coherence between these policies, some of which strongly support the retention of the Nitrates Derogation, while others include national commitments to protect the natural environment and to ensure that water quality and air quality are not detrimentally affected by agricultural activities.

6. As an example of failure to protect the environment, we refer to the very recent EPA water quality assessment which clearly identifies that the quality of our freshwater and marine ecosystems is being damaged by

agriculture and associated activities. All available evidence points to a eutrophication crisis of epic proportions, representing a significant threat to the ecological integrity of the environment.

7. Ireland is already experiencing significant ecological and socio-economic consequences from sustained nitrate pollution, and the most recent evidence shows that these pressures are intensifying rather than easing. Groundwater bodies are also showing increasing vulnerability, with several rural aquifers in the south-east recording nitrate concentrations that are approaching or exceeding drinking-water thresholds, thereby elevating risks for households dependent on private wells.

8. Other sources of information inform us that artificial fertilisers and chemical pesticides commonly used to maintain crop yields are a factor causing serious biodiversity loss, poor-quality water, high nitrate levels in drinking water, degraded soils and pest resistance, and have been linked to chronic illnesses in human populations.

9. It is our submission that this lack of coherence, complexity and overlapping nature of these policies and programmes is almost bound to ensure an inadequate implementation of the Nitrates Directive, leading to sub-optimal benefits (or very little benefit) to agriculture, biodiversity, water quality, air quality, healthy soils, and a healthy and sustainable food system and diet for a most of Ireland's population.

10. The absence of a coherent set of policies also serves to ensure that monitoring of the environment, maintaining good water and air quality and soil health, and ensuring compliance with the Nitrates Directive, are weakly enforced against the much greater pressure to produce increasing quantities of agricultural products at competitive costs.

11. In our submission, we ask if Ireland's agriculture, which consists almost exclusively of animal farming for meat and milk, is the most appropriate for this country and its climate. Ireland is unique among EU Member States in having the lowest proportion of its agricultural land under tillage (for example, cereal growing) and by far the highest proportion of its agricultural land under grass, for grazing livestock.

12. Secondly, we need to consider if the proposed draft Sixth Nitrates Action Programme 2026-2029, really addresses the root causes of water and air pollution from agricultural sources, and we have to ask if this proposed Sixth NAP makes any attempt to introduce environmental and social sustainability, and circularity, into Irish agriculture.

13. As an example of what a future environmentally sustainable and socially fair agricultural system might look like and might consist of, we include in

our submission the recommendations of a report by an Irish agricultural scientist, James O'Donovan, and the authoritative reports of the EAT–Lancet Commission on "*Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems"* (2019), and "*The EAT–Lancet Commission on healthy, sustainable, and just food systems"* (2025). Based on the work of many scientists collaborating internationally, these last two reports are powerful indictments of current agriculture and food production systems, but they also show us a way out of this nexus of global problems.

14. As the 2025 EAT Lancet report states, *"Unprecedented levels of action are required to shift diets, improve production, and enhance justice".* Unfortunately we have not found any indication in the proposed Sixth Action Programme for Nitrates that this transformation has been seriously considered. Instead, we have found that the draft Sixth Nitrates Action Programme (NAP) is indicative of an inadequate policy framework which is structurally incapable of fulfilling the mandatory, legally-binding objectives of Regulation 4(1) of the European Communities (Water Policy) Regulations 2003.

15. Therefore we have suggested a number of areas where the NAP requires substantial strengthening, and these are described in detail in our submission. In particular, the problems of water pollution and soil damage should by addressed by the forthcoming NAP adopting a risk-weighted framework grounded in geology, soil vulnerability and landscape hydrology.

16. Solutions which we advocate include:

    i) greater use of cover crops, expanding industrial hemp cultivation as a low-input, soil-enhancing, and climate-positive crop;

    ii) utilising hemp biomass as nitrogen-retentive mulch to prevent soil erosion, suppress pests, and reduce plant diseases by limiting contamination while maintaining stable soil moisture;

    iii) combining hemp mulch with natural compost inputs – a natural source of nitrogen – to build long-term soil fertility and reduce reliance on synthetic fertilisers; and embedding hemp mulch and compost as a strategy for attaining circularity in the National Strategy for Horticulture 2023–2027;

    iv) shifting from intensive agriculture to localised horticulture, supported by transparent micro-grants and a zero-tax policy on certified organic inputs;

v) promoting plant-based food systems modelled, for example, on the EAT-Lancet recommendations and on the most successful European examples, such as Amsterdam's transition to healthier, more sustainable diets;

vi) supporting and enhancing the roles of women in horticulture and the circular bioeconomy;

vii) localised horticulture, micro-grants, and circular bioeconomy models - such as hemp-based systems;

viii) lowering the barriers to entry, smaller land requirements, and more flexible structures that particularly benefit women, single parents, and newcomers to agriculture; and,

ix) ensuring equal access to grants, training, and organic input incentives which will not only enhance gender equity but will also strengthen rural resilience and innovation.

17. One of the barriers to change which we have identified is that the current Programme for Government 2025 seeks to extend the Nitrates Derogation without a clear plan to phase it out within an agreed timeframe; and this approach prioritises business-as-usual (BAU) over necessary change and innovation. Addressing these issues requires creative long-term thinking, even though we note that there are some excellent science-based programmes already working well.

18. Small-scale farming has served Ireland well in previous decades, as the scale of these farms allows farmers to manage and maintain ecosystem services. Therefore it is our submission that small-scale farming systems should be protected by diversifying farm income streams and reducing farm dependence on the current monoculture type of farming which has caused a huge biodiversity loss during the past 50 years. To state our recommendation more directly: Irish agriculture must move away from the business as usual model, and embrace initiatives which are supporting Irish nature.

19. Throughout the submission, we have taken a wide view which encompasses agriculture and the draft Nitrates Action Plan as a component of a larger system which includes water and land use, mitigation of climate change, fair and just use of resources, a just transition to a more sustainable form of agriculture and food production, and to a form of agriculture which will be based more on tillage and food plants, horticulture and local production.

We trust that the two government Departments which will examine all of the submissions received will take our analysis and recommendations into consideration.

Sara Guigui

Jack O'Sullivan

Zero Waste Alliance Ireland

This submission was researched and written by Sara Guigui (ZWAI Director), Sarisha Harikrishna (ZWAI member), Mimi Coutin Fitzsimons (ZWAI employee), Olena Larionova (ZWAI member), Aindrila Mukherjee (ZWAI member), Enda Moynagh (ZWAI member) and Jack O'Sullivan (ZWAI founder and Vice-chair); with major editing by Sara Guigui and Jack O'Sullivan, and additional editing by Janine Boscheinen (ZWAI intern).

Rialtas na hÉireann
Government of Ireland

Appendix I

Draft **Sixth Nitrates Action Programme**

2026 - 2029

Prepared by the Department of
Housing, Local Government and Heritage
gov.ie

6 Have your say

The Minister now invites members of the public to make submissions, observations and comments on the draft Sixth Nitrates Action Programme during the period 28 October 2025 to 01 December 2025. Submissions can be made either by email to WAUConsultation@housing.gov.ie or by post to:

Nitrates Action Programme Public Consultation,

Room 2.13, Department of Housing, Local Government and Heritage,

Custom House,

Dublin, D01 W6X0

Hard copies of the draft Sixth Nitrates Action Programme are available for public inspection at the Department of Housing, Local Government and Heritage offices, Custom House, Dublin, D01 W6X0 during office hours (9:00am to 5:00pm Monday to Friday, excluding public holidays) during the period from 28 October 2025 to 1 December 2025. If you wish to view the documents in person, please email WAUConsultation@housing.gov.ie to make an appointment.

The associated Strategic Environmental Assessment (SEA) and Natura Impact Statement (NIS) consultations will be launched separately to this consultation, and will run in parallel to each other. The Water Advisory Unit of the DHLGH is the lead for the SEA, and the Ecological Assessment Unit of the National Parks and Wildlife Service will lead on the consultation for the NIS.

Note, the consultation period for the draft Sixth Nitrates Action Programme may be extended to align with the SEA consultation period.

Gmail

Appendix II

Fwd: Nitrates Consultation

Sara Guigui <sara_borkent@hotmail.com> 4 December 2025 at 16:22
To: Jack O'Sullivan <jackosullivan2006@gmail.com>

Hi Jack,

The confirmation from the department attached.

---------- Forwarded message ---------
From: **Housing WAU Consultation** <wauconsultation@housing.gov.ie>
Date: Thu, 4 Dec 2025 at 16:15
Subject: RE: Nitrates Consultation
To: Sara Guigui <saraborkent2111998@gmail.com>
Cc: Housing WAU Consultation <wauconsultation@housing.gov.ie>

Dear Sara,

Thank you for your email. We received your comprehensive submission with thanks, and it has been included. You may not have received a confirmation email as it landed after 17:00 but we saw the email time.

Kind regards

Water Advisory Unit

From: Sara Guigui <saraborkent2111998@gmail.com>
Sent: Thursday 4 December 2025 15:51
To: Housing WAU Consultation <wauconsultation@housing.gov.ie>
Subject: Re: Nitrates Consultation

Good afternoon,

I hope you are doing well. I am just checking in on behalf of Zero Waste Alliance Ireland to see whether our submission for the public consultation on the draft Sixth Nitrates Action Programme was well received.