SWAN Submission to the Public Consultation on the Draft Sixth Nitrates Action Programme

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1 Overview

SWAN welcomes the opportunity to contribute to the consultation on the draft Sixth Nitrates Action Programme (NAP).

1.1 Overall assessment and tone of the draft Sixth NAP

- The draft Sixth NAP fails to reflect the gravity of Ireland's continuing breach of its WFD obligations and the central role of agriculture in nutrient pollution. Its overall tone is one of incremental progress rather than environmental urgency.
- The Programme continues to depend on measures that have not delivered the scale of improvement required under previous NAP cycles.
- It highlights temporary reductions in nutrient concentrations as indicators of success but overlooks the wider, systemic deterioration in water quality and the fact that statutory deadlines are now only two years away.

1.2 Evidence from the EPA's *Evidence-Based Targeting of Agricultural Measures* report (2025)[1] – cited in the draft Sixth NAP

- Referred to the draft Sixth NAP, the EPA's evidence-based targeting of agricultural measures confirms that the recent decline in nitrate concentrations is largely attributable to short-term, market-driven changes (e.g., input cost increases and reduced feed use) rather than the outcome of strengthened policy.
- The EPA identifies several contributing factors that have temporarily reduced nitrogen loading, including:
    - A modest reduction in the national dairy herd since 2022.
    - Slightly lower feed concentrate use due to market pressures.
    - New limits on crude protein in feed.
    - Reduced chemical nitrogen allowances for grassland.
    - The introduction of revised dairy cow excretion-rate bands.

[1] The EPA attributes the 32% decline in chemical fertiliser use in 2022 and 2023 primarily to global price shocks rather than NAP measures, warning that fertiliser sales have already increased again in 2024. See: Environmental Protection Agency (EPA) (2025) *Evidence-based targeting of agricultural measures to reduce nitrogen in catchments to achieve water quality objectives*. Wexford: Environmental Protection Agency. Available at: https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/Nitrate_Reductions_and_FLAG_Map_July2025_F01.pdf (Accessed: 8 November 2025).

- While reduced nitrogen inputs have led to lower nitrate levels in some catchments, the EPA cautions that these improvements are fragile and likely to reverse once market conditions shift. [2]
- The EPA explicitly warns that without policy-led, structural interventions, these temporary gains will not be sustained.
- The same analysis highlights that phosphorus pollution remains a persistent and widespread pressure, particularly in poorly drained catchments and areas with high soil P levels, where little or no improvement has occurred.
- This dual challenge of nitrate in freely draining catchments and phosphorus in poorly draining ones demonstrates the need for differentiated, catchment-based policy rather than a uniform national approach.[3]

1.3 SWAN's interpretation of these EPA findings

- The temporary downward trend in nitrate levels demonstrates that nutrient reductions are achievable but only if embedded in binding, verifiable, and catchment-specific frameworks.
- Presenting short-term or economically driven improvements as evidence of policy success is misleading and risks delaying the urgent reforms required.
- The next NAP must therefore treat these temporary reductions as proof of what can be achieved through decisive action, not as grounds for complacency.

1.4 What the Sixth NAP must do differently?

- Ireland is now approaching two decades of non-compliance with the Water Framework Directive. Although the Sixth NAP (2026–2029) will commence only a year before the 2027 WFD deadline, it represents Ireland's last opportunity to demonstrate decisive corrective action. While full compliance cannot be achieved within this short period, the Programme must deliver immediate, measurable reductions in nutrient loading and establish a credible enforcement framework capable of sustaining recovery beyond 2027. Without a clear downward trajectory in total nitrogen pressure at source, water quality will not recover. Failure to do so will confirm systemic non-compliance and invite further EU action.
- This requires:
    - Binding catchment-level nutrient limits in high-risk agricultural areas, calibrated to soil type, hydrology, and assimilative capacity ensuring that total nitrogen loading reductions at source are aligned with ecological targets.

[2] Ibid.
[3] Ibid.

- Mandatory nutrient-reduction plans for farms within catchments exceeding nutrient thresholds, aligned with EPA Pollution Impact Potential (PIP) and FLAG mapping.
- Transparent, spatially verified monitoring of nutrient inputs and outputs to ensure accountability, supported by integrated data systems linking DAFM, EPA, and local authority records.
- Going beyond generic national rules and introducing targeted controls in high-risk areas. Without these source and pathway-focused measures, the Programme cannot address the main drivers of ecological failure or meet its nutrient-reduction obligations.

2 SWAN's position on the Nitrates Derogation

The evidence required to justify renewal of Ireland's derogation simply does not exist. Nitrate concentrations remain well above ecological thresholds in key catchments, and no long-term improvement trends have emerged.[4] Given persistent nitrate exceedances in the main derogation catchments, the evidence required to justify renewal does not exist.[5] Ongoing failures in storage, nutrient management, and slurry spreading, combined with weak oversight, show that current and proposed controls are not sufficient to correct the structural weaknesses of the derogation system.[6] [7] However, it is important to emphasise that Ireland's nitrate challenge is rooted not in individual farm practice failure but in a systemic imbalance between herd size, land area, and nutrient capacity.

Seeking renewal under these circumstances not only fails the scientific and legal tests set by the European Commission; it is also deeply unfair to farmers. A renewal locks them into a high-input, high-cost system that is environmentally unsustainable and increasingly incompatible with EU law, setting them up for a forced adjustment later.

[4] Environmental Protection Agency (2025) *Water quality monitoring report on nitrogen and phosphorus concentrations in Irish waters 2024.* Environmental Protection Agency, Wexford, Ireland. Available at: https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/Water-Quality-Nitrogen-and-Phosphorus-Report-2024.pdf (Accessed: 8 November 2025).
[5] Environmental Protection Agency (EPA) (2025) *Evidence-based targeting of agricultural measures to reduce nitrogen in catchments to achieve water quality objectives*. Wexford: Environmental Protection Agency. Available at: https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/Nitrate_Reductions_and_FLAG_Map_July2025_F01.pdf (Accessed: 8 November 2025).
[6] Houses of the Oireachtas (2024) *Joint Committee on Agriculture, Food and the Marine debate – Nitrates Derogation and Water Quality: Discussion*, 10 July. Dublin: Houses of the Oireachtas. Available at: https://www.oireachtas.ie/en/debates/debate/joint_committee_on_agriculture_food_and_the_marine/2024-07-10/2/ (Accessed: 8 November 2025).
[7] Regional Operational Committees (2024) *Agricultural Practices Contributing to Declining Water Quality: Issues and Recommendations from Regional Operational Committees 2021–2024*. Source: n/a

Denmark's 2024 experience offers important lessons for Ireland on how *not* to manage the end of a nitrates derogation. While Denmark acted decisively to comply with the Nitrates Directive, the absence of early planning or farmer engagement caused disruption and distrust.[8] Ireland now risks the opposite error by continuing to delay decisive action until a non-renewal is imposed externally, leaving farmers equally unprepared. In addition, any uncertainty surrounding the future of the nitrates derogation causes hesitation amongst farmers, who may be unwilling to invest in long-term measures (such as capital investment in increased storage) without clarity on future regulatory conditions.[9]

SWAN's position is clear: the Department of Agriculture, Food and the Marine has a duty of honesty and foresight. It must acknowledge that renewal is not credible and instead focus on supporting farmers through a managed, evidence-based transition to sustainable stocking levels. Continuing to promise renewal without addressing the core of the issues, i.e., nitrogen loading at source, misleads the sector and erodes trust between farmers and regulators.

A structured, time-bound phase-out with early engagement, adequate financial support, and clear transition milestones offers the only fair and realistic pathway to achieving environmental integrity and policy credibility.

Therefore, SWAN recommends a progressive phase-out of the derogation by 2027, supported by a Derogation Transition Fund. This would allow time for herd adjustment, land-use diversification, and financial adaptation, while ensuring that Ireland meets its legal obligations and restores water quality.

Recommendations:

- A clear, time-bound roadmap should be published setting out annual reductions in the upper organic nitrogen limit, beginning with an immediate maximum of 200 kg N/ha in 2026 applied to all derogation farms nationwide from 2026 and reaching the statutory 170 kg N/ha by 2028. No new derogation applications should be accepted after 2026, and all existing derogation approvals should be phased down.
- SWAN calls for a national Derogation Transition Programme to provide financial and technical assistance for farmers exiting or scaling down derogation-intensive production, prioritising catchments under the greatest nutrient pressure for early roll-out. This programme should be co-funded through the Common Agricultural Policy (CAP), the

[8] Irish Independent. (2024) *Farmer fury as Denmark ends Nitrates Derogation*. [online] Available at: https://www.independent.ie/farming/news/farmer-fury-as-denmark-ends-nitrates-derogation/a914016486.html [Accessed: 11 November 2025]
[9] McDonnell, F. (2025) 'Farmers have been 'left in limbo' on the nitrates derogation - TD', *AgriLand*, 9 October. Available at: https://www.agriland.ie/farming-news/farmers-have-been-left-in-limbo-on-the-nitrates-derogation-td/ (Accessed: 11 November 2025).

Climate and Nature Fund, and Ireland's Water Action Plan budgets, ensuring integration of environmental, social, and economic objectives.

2.1 If the Derogation is Renewed: Minimum Safeguards, Conditions, and Nitrogen-Reduction Requirements

If the European Commission renews Ireland's nitrates derogation beyond 2025, it must be subject to a fundamentally restructured and legally compliant control system. Renewal without reform would perpetuate non-compliance, continued water-quality decline, and a breach of Ireland's obligations under the Nitrates and Habitats Directives.

The European Commission's July 2025 requirement that derogation approvals comply with the Habitats Directive represents a significant legal development.[10] [11] While the draft Sixth NAP and accompanying Natura Impact Statement acknowledge this new obligation, they do not provide the level of detail or procedural clarity required to implement it. SWAN therefore considers that the NAP and NIS should be updated before adoption to include a clear, operational framework for delivering these lower-tier Appropriate Assessment requirements.

Recommendations:
In light of evidence presented by the Regional Operational Committees, SWAN recommends a fundamental reform of the nitrates derogation system to ensure that it operates within the limits of environmental sustainability and legal compliance.[12]

1. Derogation eligibility must be determined by local soil type, hydrology, topography, and catchment water-quality status. It should not be granted in catchments where nitrate concentrations already exceed "good status" thresholds, where modelling indicates that additional loading would delay recovery, or where cumulative pressures risk deterioration of ecological status or adverse impacts on Natura 2000 sites.
2. Eligibility criteria should also reflect land suitability, including drainage class, slope, and proximity to watercourses, to ensure that derogation is permitted only on land demonstrably capable of assimilating nutrients without risk of runoff or leaching. In high-risk catchments, new derogation approvals should be suspended until water quality has demonstrably improved.[13]

[10] Netherlands Agricultural Network (2025) *Ireland's nitrates derogation at a crossroads ahead of crucial Brussels decision*, 25 September. The Hague: Ministry of Agriculture, Nature and Food Quality. Available at: https://www.agroberichtenbuitenland.nl/actueel/nieuws/2025/09/25/irelands-nitrates-derogation-at-a-crossroads-ahead-of-crucial-brussels-decision (Accessed: 8 November 2025)
[11] This condition makes it clear that the derogation constitutes a "project" under Article 6(3) and must undergo Appropriate Assessment before approval.
[12] The current approach has allowed intensive production to continue in high-risk areas without adequate verification of storage capacity, nutrient management, or farmyard integrity, resulting in continued nutrient losses to water.
[13] While the European Commission's new requirement for Appropriate Assessment (AA) of derogation approvals provides a necessary legal safeguard for Natura 2000 sites, it does not address the broader issue of catchment

3. All derogation applications must undergo a pre-approval on-farm inspection verifying slurry storage capacity, surfaced yards, clean/dirty water separation, effluent containment, and nutrient management systems before authorisation. Approval should only be granted where full compliance with the GAP Regulations is confirmed via on-farm inspection. A national derogation farm verification system should be established to log inspection outcomes and ensure consistent follow-up by local authorities and the EPA.
4. Only agricultural advisers who meet new competency and accountability standards should be permitted to prepare derogation nutrient-management plans. Adviser accreditation should include mandatory water-quality training, independent auditing, and clear professional accountability measures for inaccurate reporting or poor practice, consistent with the governance concerns highlighted in the *Agricultural Practices Contributing to Declining Water Quality* report.[14] DAFM should establish a Farm Advisory Licensing Register or equivalent accreditation system, with independent oversight and periodic auditing to ensure consistent professional standards. Advisory plans should be simple, transparent, and usable by enforcement officers, with standardised templates, mapped risk areas, and clear action summaries to support compliance tracking.
5. All derogation data, including inspection results, nutrient plans, and storage capacity verification, should be integrated into a single national digital platform linking the National Fertiliser Database, Organic Nutrient Movement Register, and EPA catchment monitoring systems. This would allow real-time verification and cross-agency oversight.

3 SWAN's assessment of the proposed additional regulatory measures in the draft Sixth NAP

3.1 Nutrient Balance at Farm Level ('Know Your Number')

SWAN welcomes the "Know Your Number" initiative as a step toward improving national nutrient accountability. However, restricting the measure to derogation farms, with only voluntary uptake by others, limits its potential to deliver real water-quality improvements. Nutrient pollution is a diffuse, landscape-wide pressure, and significant nutrient losses also arise

nutrient loading or compliance with the Water Framework Directive (WFD). The AA process focuses on avoiding adverse effects on designated sites, but it does not systematically assess local soil conditions, hydrology, or the wider ecological status of water bodies outside these protected areas. SWAN therefore recommends that the proposed eligibility and inspection criteria operate in parallel with the AA requirement, ensuring that derogation approvals are consistent not only with the Habitats Directive but also with Ireland's obligations to achieve and maintain good status in all water bodies under the WFD.

[14] Regional Operational Committees (2024) *Agricultural Practices Contributing to Declining Water Quality: Issues and Recommendations from Regional Operational Committees 2021–2024*. Source: n/a

from non-derogation farms. A risk-based rollout of nutrient balancing must therefore extend beyond derogation farms and include higher-stocking farms in nitrogen-sensitive areas.

A key technical limitation however, is that the current system relies on a farm-gate balance, which measures nutrient imports and exports but does not account for internally generated nitrogen inputs from clover fixation. As clover use expands under fertiliser-reduction and climate policy, omitting this biological nitrogen source increasingly undermines the accuracy of the balance. While clover reduces chemical fertiliser use, ammonia emissions and can support biodiversity, it remains a source of nitrate that is liable to leaching losses. To protect water quality, nutrient balances must therefore include estimated contributions from clover-derived nitrogen, as well as soil-type information, as soil drainage characteristics strongly influence whether nitrogen is lost through leaching or phosphorus and sediment are lost via runoff.

A nutrient-balance system that does not reflect true nitrogen inputs or local soil-hydrology risks becomes a compliance exercise rather than a driver of change. Training and advisory support must therefore focus not only on completing balances but on interpreting them in the context of soil behaviour, nutrient mobility and catchment sensitivity. This includes strengthening national capacity to advise farmers on increasing water-based nitrogen use efficiency. Improving nitrogen use efficiency at farm level, particularly in catchments of concern, would reduce nitrogen losses, optimise fertiliser inputs, support soil health and contribute to more efficient production. Catchment-specific nitrogen-use-efficiency goals would also provide a more outcome-focused framework for nutrient balancing within the NAP.

The measure's effectiveness also depends on how the data are used. Without clear policy links, farm-gate balances risk becoming a box-ticking exercise that generates data without driving action. To ensure that the information collected translates into measurable environmental improvement, nutrient balances should be verified and aggregated at catchment level.

Recommendations:
To ensure the measure's effectiveness, SWAN recommends that the Sixth NAP:

1. Introduce mandatory nutrient balancing on a phased basis from 2026, beginning with derogation farms and higher-stocking non-derogation farms in nitrogen-sensitive catchments (for example above 130–140 kg N/ha), and extending to all farms by 2027.
2. Require AgNav to incorporate water-quality-relevant parameters including soil type and estimates of biological nitrogen fixation from clover, so that nutrient balances reflect true nitrogen availability and water-quality risk.
3. Integrate nutrient-balance data with the National Fertiliser Database, the Nitrates Portal, LPIS and EPA catchment monitoring to enable coordinated assessment and risk-based follow-up across agencies.

4. Ensure that nutrient balances are verified, aggregated and linked to corrective actions where persistent surpluses occur, including adjustments to fertiliser use, stocking rate or targeted mitigation measures.
5. Provide coordinated national training and advisory support focused on understanding nutrient balances, nutrient behaviour in different soil types and measures to increase nitrogen use efficiency.

3.2 Nutrient Distribution on Fragmented Farms

SWAN supports the intention to prevent nutrient overloading of milking platforms and near-yard lands, a pattern strongly associated with elevated soil phosphorus levels and increased runoff risk. These areas frequently receive disproportionate nutrient inputs due to their intensive use, particularly repeated grazing and concentrated slurry application close to the farmyard. [15] While this can lead to phosphorus accumulation on heavier soils, it also presents a significant nitrate risk on free-draining soils, where large numbers of cattle repeatedly urinate on small areas, creating high nitrate-leaching potential. Evidence also highlights persistent traceability gaps in slurry redistribution and unverified nutrient transfers, reinforcing the need for a comprehensive regulatory framework to track and manage organic nutrient movements.[16]

SWAN therefore calls for the establishment of a comprehensive regulatory framework governing the use and movement of all high-nutrient organic materials, underpinned by full traceability and alignment with catchment nutrient-assimilation capacity.

Recommendations:

1. Expand the nutrient-movement register to include all organic materials (slurry, digestate, composts, and biosolids) and require GPS-logged, time-stamped records for each application. Integrate this data with existing platforms such as AgNav, the National Fertiliser Database, and LPIS parcel mapping to enable real-time oversight by DAFM, the EPA, and local authorities.
2. Require nutrient-content analysis for all digestates and biosolids before landspreading, and use EPA FLAG and PIP datasets to verify that these materials are spread evenly and on suitable soils.

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[15] Vero, S.E., Sherry, E. and Doody, D. (2020) 'Evidence and perception of phosphorus loss risk factors in farmyards', *Environmental Science & Policy*, 114, pp. 542–548. Elsevier. Available at: https://doi.org/10.1016/j.envsci.2020.09.022 [Accessed: 11 November 2025].

[16] A case study in County Cork revealed that 33% of declared nitrogen exports (1.5 million kg N) were unaccounted for in 2019, equivalent to the output of over 17,000 dairy cows. This points to widespread discrepancies between declared exports and actual imports. Furthermore, some slurry movements never actually occur in practice, with advisors signing off on paper records that do not reflect reality. Regional Operational Committees (2024).

3. Prohibit autumn and post-harvest spreading of high-nitrogen organic materials in nitrate-sensitive catchments unless a verified crop is in place for immediate uptake, and require Critical Source Area mapping for derogation farms to prevent spreading on hydrologically vulnerable fields..
4. Introduce catchment-level loading caps that include imported or waste-derived organic materials. New or expanded anaerobic-digestion or waste-processing facilities must demonstrate that all generated nutrients can be safely managed within these caps before licensing.

3.3 Increased Slurry and Soiled-Water Storage Capacity

The EPA's National Agricultural Inspection Programme (NAIP) has repeatedly identified deficiencies in storage capacity and soiled-water management as the most frequent causes of non-compliance under the Good Agricultural Practice (GAP) Regulations.[17]

Reports have suggested that approximately 40% of dairy farms nationally have a slurry storage deficit, with local-authority case studies showing that up to one-third of farms in derogation had no record of planning permission for any storage infrastructure.[18]

The Teagasc study cited in the draft Sixth NAP shows that actual slurry and soiled-water production on Irish dairy farms is significantly higher than current regulatory assumptions. These higher volumes were consistent nationwide and did not vary between derogation and non-derogation farms, indicating that current storage rules underestimate needs across the entire sector.[19] This is a legacy problem that must now be corrected.

Therefore, whilst SWAN supports the proposal to increase minimum slurry and soiled-water storage requirements, it emphasises that increasing slurry storage capacity must not be used to accommodate or legitimise continued high stocking densities. The expansion of storage should be treated as a transitional pollution-prevention measure, not as an enabler of further intensification. While increasing slurry storage capacity is important, it must not take priority over the urgent need to reduce the overall nitrogen load.

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[17] Environmental Protection Agency (2025) *The National Agricultural Inspection Programme: Summary Report 2024.* Environmental Protection Agency, Wexford, Ireland. Available at: https://www.epa.ie/publications/compliance--enforcement/public-authorities/national-agricultural-inspection-programme-naip-summary-report-2024.php (Accessed: 11 November 2025)

[18] Regional Operational Committees (2024).

[19] The implication is that thousands of farms may be in breach of Good Agricultural Practice (GAP) standards, especially with regard to storage capacity during closed periods. These deficits are especially concerning given the risk of inappropriate spreading under pressure to empty tanks. See: Teagasc (2025) 'Survey results: Slurry and dairy soiled water volume estimates', *Teagasc Daily*, 20 September. Available at: https://www.teagasc.ie/news-and-events/daily/survey-results-slurry-and-dairy-soiled-water-volume-estimates/ (Accessed: 11 November 2025).

Grant-aided storage construction must be tied directly to verified environmental compliance. No new derogation approvals, herd expansions, or grant payments should be permitted without prior on-farm inspection confirming that the farm has adequate and compliant slurry and soiled-water storage. In addition to quantitative capacity, the quality and integrity of storage systems must be explicitly addressed. Case studies presented to the Regional Operational Committees documented pollution incidents arising from cracked tanks, unlined lagoons, inadequate separation of clean and soiled water, and unsealed effluent channels. Storage design should therefore include:

- impermeable, leak-proof construction and integrity testing,
- covered storage to prevent dilution and overflow,
- full separation of clean and dirty water drainage, and
- rainwater management plans to prevent uncontrolled yard runoff and reduce reliance on soiled-water storage.

Addressing these gaps is essential to eliminate point-source nutrient loss.

In this context, SWAN considers that the current timeframe for enhanced storage requirements – postponing full implementation until 2028 – is inconsistent with the urgency of Ireland's water-quality crisis. Allowing a further four winters of inadequate storage represents a continued, predictable risk to high-status and nutrient-sensitive catchments.

Recommendations:

1. SWAN considers that postponing full implementation of the enhanced storage requirements until 2028 is incompatible with both the scale of Ireland's storage deficit and the urgency of the water-quality crisis. Deferring action by four further winters will perpetuate known and preventable nutrient losses in already sensitive catchments. Moreover, accelerating construction under weakened planning control risks reproducing the same legacy of poorly designed and unverified storage that created the current problem. Storage reform must therefore proceed on a shorter timeline, be subject to full environmental oversight, and operate within a broader framework of reducing nitrogen and phosphorus loading at source.[20]

[20] SWAN is concerned that granting broad planning exemptions for new manure-storage facilities may undermine regulatory oversight and public accountability. Given the high rate of farmyard-related non-compliance identified by the EPA, storage construction must be subject to appropriate planning review to ensure correct siting, engineering standards, and cumulative impact assessment, particularly in nutrient-sensitive catchments

2. Treat increased storage as a transitional pollution-prevention measure, not as a mechanism to maintain or expand high stocking densities. All storage upgrades must form part of a wider plan to reduce nitrogen and phosphorus loading at source.
3. Require independent on-farm inspection confirming that slurry and soiled-water storage meets GAP standards and aligns with the farm's nutrient-reduction plan. TAMS and other capital grants should be tied to verified construction milestones.
4. While grant aid for storage construction is appropriate where it directly addresses historic infrastructure deficits, SWAN cautions that such funding must not be used to perpetuate high stocking densities or sustain the current nutrient load. Public funds should be targeted to farms demonstrating verified need, environmental compliance, and a credible plan to reduce nitrogen and phosphorus surpluses.

3.4 Chemical Nitrogen Allowances

In predominantly rural catchments, more than 85% of nitrogen sources derive from chemical and organic fertilisers associated with agriculture.[21] This confirms that reducing both synthetic and organic nitrogen loading is critical. SWAN is concerned that no further reduction in chemical nitrogen allowances is proposed under the draft Sixth NAP.

SWAN notes that the proposal to maintain current chemical nitrogen allowances for grassland, relies on Teagasc's 2025 modelling, which warns that further uniform reductions could lead to forage deficits and increased reliance on imported feed.[22] While this analysis provides valuable insight into the system's sensitivity, its findings point not to a fertiliser shortage but to a deeper structural imbalance in the current production model.

The Teagasc study found that at current stocking rates, further nitrogen reductions would modestly reduce nitrate leaching (by 2–7%) but would also create negative forage balances at stocking levels above 210–220 kg organic N/ha. While Teagasc modelling indicates only modest reductions in nitrate leaching from lower fertiliser allowances, this reflects the assumption of unchanged stocking intensity. The findings therefore confirm that fertiliser policy alone cannot achieve water-quality objectives; reductions in total nitrogen loading, including organic sources,

[21] Environmental Protection Agency. (2021) *Assessment of the catchments that need reductions in nitrogen concentrations to achieve water quality objectives: WFD River Basin Management Plan – 3rd Cycle.* June. Dublin: Environmental Protection Agency. Available at: https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/Catchment-nitrogen-reductions-assessment---June-2021.pdf (Accessed: 12 November 2025).

[22] Teagasc (2025) *An environmental and economic assessment on the impact of possible reductions in the maximum chemical nitrogen allowances for all grassland stocking rates*. Teagasc, Oak Park, Carlow. Available 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 (Accessed: 11 November 2025).

are necessary. Maintaining current allowances without addressing stocking levels would perpetuate systemic nutrient surpluses and continued nitrogen loss to water.

SWAN therefore considers the Teagasc evidence as confirmation that Ireland's pasture-based dairy model has reached its environmental and agronomic limit. The requirement to sustain high chemical N inputs to avoid feed deficits demonstrates that stocking levels in many catchments already exceed the natural carrying capacity of the land and its nutrient-assimilation potential. Holding nitrogen allowances at current levels effectively locks the system into a high-input, high-loss configuration inconsistent with the WFD non-deterioration obligation and with the goal of achieving good ecological status.

SWAN notes that Teagasc's analysis assumes continued poor soil fertility across the sector, with only 24% of dairy soils at optimum pH, P, and K. This widespread fertility deficit means that nitrogen use efficiency remains low, amplifying losses to water. The conclusion should not be to maintain high chemical N rates but to rebalance stocking pressure, restore soil health, and reduce reliance on imported and synthetic inputs.

SWAN also points out that the promotion of white clover and multispecies swards as a substitute for chemical nitrogen is welcome but must be approached with caution.[23] While these systems can reduce fertiliser demand, they do not eliminate nitrogen losses. Biological nitrogen fixation by clover and legumes can still result in nitrate leaching, particularly where stocking rates remain high or where sward management leads to seasonal die-off and nitrogen release when plant uptake is low.[24] Without accompanying reductions in nitrogen loading and improved nutrient management, such measures risk substituting one nitrogen source for another rather than delivering genuine reductions in nitrogen loading.

From a catchment-management perspective, maintaining national ceilings is not consistent with either scientific evidence or the WFD's spatially differentiated approach. Nutrient limits must be calibrated to local water-quality status and soil vulnerability, with stricter nitrogen and stocking caps in catchments failing to meet good status. Ultimately, the Teagasc findings strengthen, rather than weaken, the case for reform. They show that the present system is agronomically unstable and environmentally unsustainable – one that depends on imported nutrients and continuous fertiliser input to sustain stocking rates already too high for the land's absorptive capacity.

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[23] Clover experience is associated with lower fertiliser use, but adoption is extremely limited (~4.6% of farms). See: Aguiar-Noury, F., Buckley, C. and Hynes, S. (2025). *Behind the application of chemical fertilizers: What influences farmers' demand?* Working Paper. J.E. Cairnes School of Business & Economics, University of Galway and Teagasc. [Accessed: 11 November, 2025]

[24] Ruz-Jerez, B.E., White, R.E. & Ball, P.R. (1995) 'A comparison of nitrate leaching under clover-based pastures and nitrogen-fertilised grass grazed by sheep', *Journal of Agricultural Science*, 125(3), pp. 361-369. doi:10.1017/S0021859600084860. [Accessed: 11 November, 2025]

Recommendations:

1. Shift policy focus from maintaining productivity through nutrient loading to sustaining production through balanced stocking, efficient nutrient cycling, and soil restoration.
2. Introduce catchment-specific, performance-based nitrogen and stocking limits, replacing uniform national ceilings with thresholds calibrated to local catchment characteristics – including soil type, drainage, groundwater vulnerability, and water-quality status – as identified through EPA FLAG and PIP mapping. These tools should be used to delineate high-risk zones and to guide both nitrogen allocation and regulatory oversight, ensuring that reductions are targeted where they will have the greatest environmental effect.
3. Reform chemical nitrogen allowances to align with catchment nutrient capacity and stocking intensity. Teagasc modelling (2025) shows that modest fertiliser reductions alone yield limited nitrate improvements while creating feed deficits at high stocking levels. SWAN recommends phased, catchment-specific reductions in high-risk areas, coupled with measures to reduce total nitrogen loading through balanced stocking and improved nutrient management efficiency.

3.5 Timing of Nutrient Application for Arable Crops

Whilst SWAN welcomes the recognition that autumn and post-harvest spreading of organic materials is a major source of diffuse nitrogen and phosphorus loss, particularly on free-draining soils, it is deeply concerned that the measure's spatial and temporal scope is far too limited. For example:

- the restriction applies only to the Barrow and Slaney catchments, despite EPA FLAG (2025) data showing nitrate exceedances and estuarine nutrient surpluses across the southeast and south coast, including the Suir, Nore, Blackwater, and Bandon catchments.[25]

- Deferring implementation until 2028 – the final year of the Sixth NAP and one year beyond the WFD 2027 deadline – renders the measure ineffective for current water-quality objectives.

- The EPA 2025 FLAG and PIP maps confirm that 85% of agricultural nitrogen losses originate from fertiliser and slurry rather than biosolids.[26] Focusing exclusively on biosolids overlooks equivalent leaching risks from other high-nitrogen organic fertilisers that pose similar risks, including anaerobic digestate (with comparable nitrogen and phosphorus content to biosolids); cattle slurry and poultry litter (often applied post-

[25] Environmental Protection Agency (EPA) (2025) *Evidence-based targeting of agricultural measures to reduce nitrogen in catchments to achieve water quality objectives*.
[26] Ibid.

harvest due to limited storage); and composts and organic wastes applied under waste licences without integrated nutrient accounting.

This measure, as currently designed, will therefore deliver marginal environmental benefit. SWAN calls for the restriction to be broadened, accelerated, and applied consistently across all nutrient-sensitive catchments.

SWAN considers that, while the proposed mandatory incorporation and crop establishment requirements are a step in the right direction, they fall significantly short of what is required to protect high-risk catchments and achieve meaningful nutrient reductions. Evidence from national monitoring shows that autumn manure application, even when incorporated, continues to drive nitrate losses where rainfall and drainage are high.[27] Incorporation within 21 days may not guarantee nutrient retention, particularly where soils are saturated or where crops fail to establish.

Recommendations:

1. Extend the spatial scope of this measure beyond the Barrow and Slaney to include all nutrient-sensitive catchments identified through EPA FLAG and PIP mapping, including the Suir, Nore, Blackwater, and Bandon. Bring forward implementation to 2026 to ensure that strengthened spreading controls contribute to the current Water Framework Directive cycle. Deferring to 2028 would allow at least two further winters of predictable nutrient loss in high-risk catchments.
2. Broaden the measure to cover all high-nitrogen organic materials including slurry, anaerobic digestate, poultry litter, and composts not only biosolids, reflecting their equivalent nutrient and leaching potential.
3. Prohibit autumn and post-harvest organic-manure applications on high-risk soils and catchments as identified through EPA FLAG and PIP data, replacing the 21-day incorporation rule with a risk-based restriction that accounts for soil type, rainfall, hydrological connectivity, and catchment status.
4. Require verification of crop establishment where autumn applications are permitted, with compliance supported by digital reporting or photographic evidence to ensure genuine nutrient uptake and soil cover.
5. Integrate the measure with national nutrient-management planning, ensuring that organic-manure applications are recorded, risk-assessed, and incorporated within catchment-level nitrogen budgets.

[27] McAleer, E., Coxon, C., Mellander, P.-E., Grant, J., & Richards, K. (2022). Patterns and Drivers of Groundwater and Stream Nitrate Concentrations in Intensively Managed Agricultural Catchments. *Water*, *14*(9), 1388. Available at: https://doi.org/10.3390/w14091388. [Accessed: 5 November 2025]

3.6 Expansion of the Organic Nutrient Movement Database

While SWAN supports the expansion of DAFM's nutrient-movement database to cover organic manures, including biosolids and digestates, it considers that the four-day reporting window is long and prevents timely oversight or real-time monitoring.

There are currently major weaknesses in Ireland's current manure-movement tracking system.[28] [29] Recommended is a strengthened system of real-time reporting (within four days), direct local authority access to records, and independent verification of receiving lands through soil testing and nutrient management planning.

SWAN welcomes expansion of DAFM's nutrient-movement database to cover all organic manures, including biosolids and digestates. Effective tracking is critical to prevent over-application and to support coordinated enforcement. However, four-day reporting is insufficient for timely oversight. Data must be accessible in real time to DAFM, EPA, and local authorities, and linked to the NAIP system.

To meet its legal obligations under the WFD and the Nitrates Directive, Ireland must establish a fully integrated, transparent, and enforceable nutrient-movement system. This system should provide real-time traceability of all organic and chemical nutrient movements, enabling proactive compliance and coordinated oversight across agencies.

Recommendations:

1. Extend DAFM's nutrient-movement database to include all organic nutrient sources, including anaerobic-digestion by-products, biosolids, industrial and municipal sludges, composts, and imported/exported materials. The system should record movements from source to field, identify receiving land parcels, and be accessible to DAFM, the EPA, and local authorities for coordinated oversight. Data should include nutrient content and tonnage information, ensuring that all organic material applied to land is tracked, verified, and incorporated into national nutrient budgets.

[28] Local authorities report that the DAFM database records only farm-to-farm slurry transfers, leaving the movements of biosolids, sludges, composts, and digestates largely untracked. Analysis of 2019 data for County Cork found that 33% of declared organic nitrogen exports were unaccounted for when comparing export and import declarations – equivalent to the nitrogen output of around 17,000 dairy cows. These data gaps, coupled with months-long delays in access for local authorities, undermine oversight and enforcement.

[29] The 2025 *Report of the Sludges, Biosolids and Other Organic Fertilisers Working Group* confirmed that Ireland still lacks a single, integrated register capable of tracking all organic nutrient movements from source to field. The report found persistent breaks in chains of custody, poor coordination between regulators, and the risk of repeat or excessive applications on the same land parcels, particularly on fragmented farms importing multiple organic materials. See: Sludges, Biosolids and Other Organic Fertilisers Working Group (2025) *Report of the Sludges, Biosolids and Other Organic Fertilisers Working Group.* Prepared for the National Technical Implementation Group (NTIG). Available at: https://www.catchments.ie/report-of-the-sludges-and-organic-fertilisers-working-group (Accessed: 12 November 2025)

2. Introduce immediate digital reporting (within 24 hours) for all nutrient transfers, supported by GPS verification, nutrient-content data, and automated cross-checking with soil-test results, crop requirements, and catchment nutrient ceilings. "Real-time" reporting should enable early detection of potential over-application before spreading occurs.
3. Develop a fully interoperable digital platform linking the nutrient-movement database with the National Fertiliser Database, the National Agricultural Inspection Programme, and LAWPRO catchment systems. This integration would facilitate automated risk screening, joint inspections, and coordinated enforcement between agencies.

3.7 National Agricultural Inspection Programme (NAIP) and Enforcement

A system where over 40% of inspected farms fail to meet minimum legal standards cannot deliver water-quality improvement or ensure compliance with the WFD.[30]

The EPA's 2024 Local Authority Environmental Enforcement Performance Report confirms that local authorities have yet to meet the National Agricultural Inspection Programme (NAIP) target of 4,500 annual farm inspections, with only 2,598 inspections completed in 2024. It also records that just 18 local authorities achieved a Strong or Excellent performance rating for farmyard inspections, and 19 for farmland inspections, while only 31 water-related prosecutions were initiated nationally.[31]

Enforcement in Ireland remains fragmented, reactive and under-resourced, with large regional variation in inspection rates and some counties reporting no inspections at all in recent years.[32] There is also a lack of formal feedback between water-quality monitoring and enforcement action meaning deterioration in a catchment does not automatically trigger intensified inspection or sanction escalation.[33] Local authorities face data access barriers, inconsistent inspection protocols, and limited cross-agency coordination.[34]

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[30] The EPA's *2024 NAIP Summary Report* recorded a 42% non-compliance rate for GAP Regulations, with most breaches linked to inadequate slurry storage, poor soiled-water management, and unlawful spreading practices. See: Environmental Protection Agency (2025) *National Agricultural Inspection Programme: Summary Report 2024.* Environmental Protection Agency, Wexford, Ireland. Available at: https://www.epa.ie/publications/compliance--enforcement/public-authorities/NAIP-Summary-Report-2024.pdf (Accessed: 11 November, 2025)

[31] Environmental Protection Agency (2025) *Local Authority Environmental Enforcement – Performance Report 2024.* Environmental Protection Agency, Wexford, Ireland. Available at: https://www.epa.ie/publications/compliance--enforcement/public-authorities/Local-Authority-Environmental-Enforcement-Performance-Report-2024.pdf (Accessed: 12 November 2025)

[32] Ibid.

[33] Regional Operational Committees (2024).

[34] While the creation of NAIP was a major step forward, its effectiveness is constrained by gaps in data integration – for example, inspection findings are not consistently cross-checked against the DAFM nutrient movement database, the National Fertiliser Register, or EPA catchment monitoring results. This fragmentation prevents early identification of high-risk farms and critical source areas. There are also delays in data sharing between DAFM and local authorities, which reduce the ability to intervene proactively. See: Regional Operational Committees (2024).

Noncompliance is often geographically concentrated and farms undergoing change are significantly more likely to violate regulations, while repeat offenders contribute disproportionately to overall breaches.[35] Statistical models using DAFM administrative data could predict violations more accurately than existing inspection rules, highlighting the potential for integrated data systems to target high-risk farms and improve compliance outcomes.[36]

SWAN therefore welcomes the continued operation and risk-based approach of the NAIP but remains concerned that the current staffing model (based on short-term contracts to 2027) undermines continuity, institutional capacity, and the development of long-term expertise. SWAN therefore supports the proposal to make NAIP inspectors permanent public-service positions but stresses that permanence alone will not deliver effective enforcement. Inspections must be strategic, transparent, and outcome-driven.

The absence of quantified compliance targets and performance indicators within the current framework suggests that enforcement will continue to be treated as an administrative function rather than a key environmental management tool. To address this structural weakness, SWAN calls for a National Compliance Performance Framework to be embedded within the NAP and GAP Regulations. This framework should establish clear compliance targets, define inspection performance indicators, and link funding and regulatory reform to measured progress.

Recommendations:

1. Make all inspector posts permanent and establish a core annual inspection quota per county, proportionate to agricultural intensity and catchment water-quality risk.
2. Introduce a proportionate, tiered enforcement system where repeat or serious non-compliance triggers stronger corrective actions, including review of derogation eligibility and CAP cross-compliance status. The focus should shift from reactive inspection to preventive, risk-based oversight.
3. Establish national and regional targets (for example, achieving 90% compliance by 2028) for key Nitrates Regulations provisions such as slurry storage.
4. Create a National Compliance Performance Framework. Coordinate the framework through the EPA, defining performance indicators, timelines, and reporting obligations for all inspection bodies.
5. Ensure that NAIP findings directly inform regulatory adjustments. Persistently high-risk or non-compliant areas should automatically trigger increased inspections, enhanced enforcement, or additional catchment-specific controls.

[35] Lunn, P., Lyons, S. and Murphy, M. (2019) *Predicting farms' noncompliance with regulations on nitrate pollution.* ESRI Working Paper No. 609, The Economic and Social Research Institute, Dublin. Available at: https://www.econstor.eu/bitstream/10419/193946/1/WP609.pdf (Accessed: 11 November 2025)
[36] Ibid.

3.8 Review and Simplification of the GAP Regulations

SWAN cautions that any simplification of the GAP Regulations must not weaken environmental protections or reduce enforceability. Simplification should focus solely on improving clarity and consistency, not on relaxing standards or oversight.

SWAN therefore calls for a statutory non-regression clause ensuring that no simplification results in weaker protections. The new regulations should include an adaptive tightening mechanism, requiring the relevant Ministers to strengthen specific measures automatically where EPA monitoring shows no improvement or deterioration in catchment water quality.

SWAN recommends that all core technical standards – including slurry and soiled-water storage capacity, spreading conditions, setback distances, and Critical Source Area protections – be fully codified in legally binding Schedules to the Regulations. At present, some key definitions and technical details remain in advisory guidance, creating inconsistency in enforcement. Codifying these provisions would ensure that compliance is based on law rather than interpretation.

Recommendations:

1. Insert a statutory non-regression clause in the GAP Regulations to ensure simplification cannot weaken environmental standards.

2. Codify all technical standards (storage design, spreading conditions, buffer zones, CSA mapping) within legally binding schedules, not guidance notes.

4 SWAN's assessment of the non-regulatory measures in the draft Sixth NAP

4.1 Expansion of the Agricultural Sustainability Support and Advisory Programme (ASSAP)

While ASSAP represents an important recognition of the need for farm-level engagement, its voluntary and advisory-only model significantly limits its capacity to address the scale of agricultural pressures on water quality. Evidence suggests that as is, the programme's outreach cannot deliver the behavioural or structural change at a scale required to achieve WFD objectives.[37]

[37] For example, one study found that of participating farmers, only 43% of farmers knew the ecological status of their nearest river and 65% believed farmers were "already doing enough" for water quality. Farmers were far more willing to say they'd adopt low-visibility actions (like fertiliser planning) than visible, costly measures (like fencing or yard upgrades) and 56% said they would act only with financial incentives, while only 24% viewed advisory

The 2021 ASSAP Independent Expert Review indicates that the programme's voluntary and confidential design constrains its transparency and limits independent verification of outcomes.[38] Subsequent research confirmed that, in the absence of independent verification, stated farmer intentions cannot be assumed to reflect actual behavioural change. The authors explicitly recommend greater transparency and public commitment mechanisms to strengthen its impact (as shown in comparable Dutch initiatives).[39]

In this context, SWAN considers that the planned expansion of ASSAP should focus on depth before scale, that is, building transparent verification, spatially linked data, and systematic follow-up into the programme's structure before widening its geographic reach. Formalising data exchange and feedback between ASSAP, NAIP, LAWPRO, and EPA monitoring would create a genuine outcomes framework in which advisory interventions can be tracked and evaluated. Without this structure, expansion risks broadening participation without delivering measurable environmental gains.

Recommendations:

1. Expand ASSAP in tandem with a system for verified, spatially recorded farm actions so that advisory activity can be assessed against monitored improvements in water quality.
2. Establish formal data-sharing and feedback loops between ASSAP, NAIP, LAWPRO, and EPA monitoring, ensuring that advisory insights guide inspection priorities and inspection results inform advisory focus.
3. Direct new resources toward deeper engagement and follow-up in existing Priority Areas for Action before expanding to new catchments.

services like ASSAP as effective motivators. Overall, the study concludes that stated willingness often does not match actual implementation, creating "strategic bias." See: Osawe, W., & Curtis, J. (2024) 'An assessment of farmers' knowledge, attitudes and intentions towards water quality and pollution risk mitigation actions', *Social Sciences & Humanities Open*, 9, 100858. Available at: https://doi.org/10.1016/j.ssaho.2024.100858 (Accessed: 11 November 2024).

[38] While ASSAP maintains internal records of agreed farm actions and follow-up visits, these data are not yet available for external analysis or catchment-level evaluation. The Expert Review identified "closing the loop" on verification as one of ASSAP's central challenges and recommended the completion of spatial recording of farm-level measures and the creation of "safe spaces" to demonstrate transparently that actions are being implemented and are improving water quality. It also emphasised the need to balance confidentiality with greater openness to maintain public trust and accountability. See: Agricultural Sustainability Support and Advisory Programme (ASSAP) Expert Review Group (2021) *ASSAP Expert Review: Final Report.* Teagasc, Oak Park, Carlow, and Dairy Sustainability Ireland, Dublin. Available at: https://teagasc.ie/wp-content/uploads/2025/05/ASSAP-Expert-Review-Final-Report-pdf-22-Nov-2021.pdf (Accessed: 11 November 2025)

[39] Osawe, W., & Curtis, J. (2024).

4.2 Continuation of the Farming for Water European Innovation Partnership (EIP)

SWAN supports the continuation of the Farming for Water European Innovation Partnership (EIP) as a valuable mechanism for collaborative, farmer-led water-quality improvement. However, its continuation must be conditional on three key reforms to ensure real environmental outcomes rather than symbolic participation.

- First, participation must be spatially targeted to the critical source areas and high-pressure catchments identified through EPA Pollution Impact Potential (PIP) mapping and LAWPRO assessments. Targeting is essential to ensure that public funding delivers additionality where nutrient pressures are greatest.
- Second, the programme must be fully integrated with existing advisory, enforcement, and monitoring structures, including ASSAP, LAWPRO, the NAIP, and EPA water-quality monitoring. Shared data systems and feedback loops are needed so that funded measures are verified, mapped, and linked directly to monitored environmental outcomes.
- Third, results must be transparently reported at anonymised catchment level. Publishing outcome data would allow independent assessment of environmental effectiveness while maintaining farmer confidentiality, building public confidence in the scheme and demonstrating value for money.

More broadly, while the draft Sixth NAP references substantial public investment through TAMS, ACRES, and the Farming for Water EIP, it provides no mechanism linking funding to verifiable environmental results. Without clear performance indicators, these programmes risk perpetuating business-as-usual rather than supporting transformative nutrient reduction. SWAN therefore calls for a comprehensive, results-based funding model that ties public investment directly to measurable water-quality improvements.

Recommendations:

1. Direct participation in the Farming for Water EIP to high-risk catchments and critical source areas identified through EPA PIP mapping and LAWPRO datasets to maximise environmental additionality.
2. Establish formal data-sharing protocols and joint reporting mechanisms between the EIP, ASSAP, LAWPRO, NAIP, and EPA monitoring to ensure that funded measures are verified, spatially mapped, and linked to observed improvements in water quality.
3. Align payments with measurable environmental outcomes or verified implementation rather than simple participation, ensuring that funding drives genuine nutrient reductions.

4.3 Knowledge Transfer and Awareness-Raising

SWAN welcomes the renewed focus on knowledge transfer and awareness raising under the Sixth NAP as a necessary foundation for better farm practice. However, show that awareness on its own does not reliably translate into behaviour change or improved water quality. To be effective, these initiatives must go beyond information provision by linking training to verified implementation, locally relevant data, and behavioural supports that make good practice routine and visible within farm communities.

Whilst farmers may recognise the importance of water protection, they may also underestimate their own contribution to nutrient losses, often believing that water quality is adequate and that they are already doing enough.[40] Social norms and peer influence are among the strongest predictors of behavioural change – farmers are more likely to act when they see neighbouring farms adopting similar practices or when advice is delivered through trusted local networks.[41]

Serious weaknesses in the quality, consistency, and oversight of agricultural advisory services have been reported – and the development of a Farm Advisory Oversight System, including a DAFM-managed licensing register to ensure accountability and professional standards, has been recommended.[42]

Based on the available evidence, SWAN welcomes the proposal in the draft Sixth NAP to introduce mandatory water-quality training for all Farm Advisory Service (FAS) advisers from 2026, with advanced certification for those advising derogation farms. This measure addresses long-standing governance weaknesses identified by the Regional Operational Committees and represents an important first step toward aligning nutrient management advice with environmental protection objectives. However, these proposals will only succeed if they are designed as part of a broader professional reform.

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[40] Osawe & Curtis (2024) survey of ASSAP participants found that while 73% of farmers expressed willingness to adopt advisory measures, actual implementation was uncertain and heavily dependent on the perceived cost, visibility, and benefit of each measure. See: Osawe, W., & Curtis, J. (2024).

[41] Ibid.

[42] Case studies presented by local authorities, Inland Fisheries Ireland, and LAWPRO reveal instances where farm plans were signed off despite inadequate slurry storage, poor surface water management, or other clear non-compliance with GAP Regulations. Some farm advisors were found to have provided incorrect or misleading information to planning authorities and DAFM regarding herd size, storage capacity, or infrastructure. The report further notes that many advisers lack adequate understanding of hydrological connectivity, nutrient pathways, and catchment risk, leading to inconsistent or inaccurate advice to farmers. It calls for the mainstreaming of water stewardship and catchment science into adviser training**,** so that all farm advice – not just environmental programmes like ASSAP – reflects the objectives of the WFD, the River Basin Management Plan, and the NAP. Regional Operational Committees (2024) *Agricultural Practices Contributing to Declining Water Quality: Issues and Recommendations from Regional Operational Committees 2021–2024*.

Recommendations:

1. Replace one-off training events with an accredited, recurrent system that includes independent evaluation of outcomes. The programme should incorporate behavioural insights, local peer learning, and measurable tracking of how advisory actions contribute to water-quality improvements.
2. Apply training and certification not only to Farm Advisory Service (FAS) advisers but also to private consultants, agri-business employees, and co-operative advisers who prepare nutrient management or derogation plans. This ensures that all advisory professionals influencing farm-level decisions meet the same environmental competence standards.
3. Develop the curriculum jointly with key environmental stakeholders so that advisers understand hydrology, sediment transport, and critical-source-area dynamics. All content should explicitly align with the WFD and River Basin Management Plan (RBMP) objectives. Within this, provide specific and detailed training on nitrogen pathways and risks, including how nitrate behaves differently from phosphorus, the vulnerability of free-draining soils, and why phosphorus-oriented mitigation measures (such as buffer strips or fencing) do not address nitrate leaching.
4. Create a DAFM-managed Farm Advisory Licensing Register with authority to set professional standards, require continuing education, investigate malpractice, and apply proportionate sanctions. Public reporting of licence status and disciplinary actions should ensure accountability and transparency.
5. Deliver the "Know Your Local Water Quality" initiative through catchment-based events that show farmers real-time monitoring data and nutrient-reduction targets. Support this with networks of demonstration farms and peer-to-peer learning groups to build shared ownership of water-quality outcomes. Integrate a focus on nitrogen loss on free-draining soils, demonstrating the specific risks from grazing intensity, urine-N deposition, and soil vulnerability, so that farmers can link local data to the nitrogen pressures most relevant in their area.

4.4 Continuation of the Teagasc Agricultural Catchments Programme (ACP)

SWAN supports the continuation to 2029 and beyond of the ACP. However, ACP outputs must now move from observation to application.

While ACP outputs have informed recent evidence-based targeting and catchment mapping initiatives, their integration into policy design, regulatory thresholds, and enforcement priorities remains limited. The ACP should now evolve from a primarily research-focused initiative into a structured policy-support and accountability mechanism for the NAP and River Basin Management Plans.

Policy development should recognise the well-established distinction between nitrogen and phosphorus behaviour across soil types. [43] Nitrate losses are most acute on free-draining soils, where rapid percolation and grazing intensity drive leaching, while phosphorus losses predominantly arise on heavier or poorly draining soils where overland flow occurs. These patterns are long understood and should inform a more spatially differentiated regulatory approach focused on the dominant hydrological pathways in each landscape. While certain biological responses can take time, reductions in nitrate concentrations on free-draining soils can occur over relatively short periods where pressure is effectively reduced.

Recommendations:

1. Strengthen the ACP network so that it provides greater representative coverage of Ireland's major soil and hydrological conditions. While the current catchments include some variation, including a karst system, important landscape types such as heavy-clay basins with high phosphorus mobilisation risk remain under-represented. Expanding the network to reflect these environments would improve the national evidence base and support the development of more catchment-sensitive policy measures.
2. Establish formal data-sharing pathways between the ACP, ASSAP, LAWPRO, the NAIP, and DAFM databases to ensure that scientific findings are translated rapidly into practical, measurable actions at farm level. This integration would link real-time evidence to compliance strategies, nutrient planning, and targeted advisory support.

5 SWAN's view on what should be in the Sixth NAP (measures missing)

5.1 Catchment-Specific Nutrient Management

The EPA's 2025 FLAG and Nitrate Reductions report identifies seven major catchments (the Barrow, Slaney, Nore, Suir, Blackwater, Boyne, and Bandon) that require nitrogen load reductions of between 2% and 38% to restore good ecological status. [44] [45] Despite this, the draft

[43] Teagasc (n.d) *Agricultural Catchments Programme: Key findings.* Available at: https://www.teagasc.ie/environment/water-quality/agricultural-catchments/research/acp-key-findings/ (Accessed: 11 November 2025).

[44] Environmental Protection Agency (EPA) (2025) *Evidence-based targeting of agricultural measures to reduce nitrogen in catchments to achieve water quality objectives*. Wexford: Environmental Protection Agency. Available at: https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/Nitrate_Reductions_and_FLAG_Map_July2025_F01.pdf (Accessed: 8 November 2025).

[45] Areas dominated by free-draining soils, common in intensive agricultural regions, may experience elevated nitrate leaching even when farms comply fully with the stipulated limit. This highlights the inadequacy of applying a uniform measure nationally, irrespective of varying catchment characteristics and vulnerabilities. Additionally, legacy nitrogen stored in soils and groundwater poses long-term pollution risks that input limits alone cannot address. These historical nutrient accumulations introduce significant time lags between policy implementation and

Sixth NAP sets no quantified nutrient-reduction targets, either nationally or by catchment, limiting accountability and adaptive oversight.

The EPA has repeatedly emphasised that nutrient reduction must be catchment-specific, data-driven, and grounded in integrated catchment management. Actions must therefore be aligned with soil type, hydrology, and ecological sensitivity rather than uniform national limits. In freely draining soils, nitrate leaching dominates and measures such as reduced nitrogen inputs, lower stocking rates, and improved grazing management are most effective. In contrast, poorly drained soils require phosphorus and sediment-control measures such as buffer strips, riparian planting, and runoff interception.[46]

SWAN acknowledges that DAFM and the EPA may not yet possess a complete modelling framework for defining binding catchment-level limits. However, the necessary scientific tools are already in place. The EPA's Source Load Apportionment Model (SLAM), Pollution Impact Potential mapping, and FLAG datasets integrate monitoring and modelling data to identify the catchments and sub-catchments where agricultural nutrient reductions are most urgently required. The FLAG report confirms that these tools can provide an evidence base for interim, catchment-specific zoning and nutrient-reduction benchmarks.

- While the draft NAP references the use of FLAG and PIP maps for spatial targeting, it stops short of operationalising them. There is no commitment to develop catchment-level nutrient ceilings or quantify reduction targets during this NAP cycle.
- The Programme also continues to rely on uniform nitrogen and phosphorus limits and a static stocking-rate threshold of 170 kg N/ha, which measures input intensity rather than actual environmental outcomes. Two farms applying identical nitrogen rates can have very different impacts on water quality, depending on local soils, hydrology, and management. In addition, the evidence base supporting 170 kg N/ha as an environmentally safe or scientifically justified limit has never been made publicly available. Unless this has been provided for the current NAP, this remains a significant gap and undermines the credibility of applying the threshold as a universal regulatory benchmark.

observable environmental outcomes, complicating assessments and potentially delaying urgently needed policy adjustments.

[46] Waters of Life. (2023) Waters of LIFE Framework of Measures for HSO River Water Bodies. Measures Framework. Agricultural Measures Effectiveness Table. Available at: https://www.watersoflife.ie/app/uploads/2023/08/Measures_Framework.pdf (Accessed: 11 November 2025)

The NAP notes that DAFM and the EPA have initiated joint modelling work (*Modelling the Impacts of Agriculture on Water Quality*) to improve understanding of nutrient pressures and support future targeting.

Unfortunately, the draft Sixth NAP does not include a work programme or timeline for outputs from this ongoing modelling. The absence of such detail limits confidence that the modelling will fulfil its intended purpose of informing adaptive policy design.

However, while this work is still in progress, it provides an opportunity to develop a phased approach: using existing models and datasets to establish interim catchment benchmarks now, while building toward fully modelled nutrient ceilings in the next NAP cycle.

SWAN therefore recommends that the Sixth NAP use available EPA modelling and monitoring outputs to establish provisional, catchment-specific nutrient-reduction benchmarks in the seven high-risk catchments, to be refined as improved data become available after 2026. Targeted zoning should include:

- limits on stocking rates and nitrogen loading in catchments identified for nitrate reduction;
- shorter slurry-spreading seasons and mandatory nutrient-reduction plans within "catchments of concern"; and
- prioritised phosphorus and sediment-control measures (e.g., buffer strips, fencing, and runoff interception) on poorly drained soils.

This approach would enable the Sixth NAP to make measurable progress within the current cycle while preparing the foundation for fully modelled, catchment-specific nutrient ceilings in the next programme.

5.2 Addressing Nitrogen Losses from Urine Patches

Livestock urine patches are a dominant source of nitrate loss on freely draining soils, as nitrogen concentrations in each patch often exceed the uptake capacity of surrounding plants. Teagasc modelling demonstrated that urine patches from cattle at pasture can be responsible for as much as 62% of nitrate leached.[47]

The draft Sixth NAP and GAP Regulations include indirect measures, such as reduced crude protein in feed and revised dairy cow excretion bands, that may modestly lower nitrogen

[47] Dodd, R., Murphy, P.N.C., Fenton, O., Buckley, C., and Wall, D. (2021) *Nitrates Modelling Project: Integrated modelling approaches to inform agricultural nutrient management and policy.* Teagasc, Johnstown Castle, Wexford, Ireland. Available at: https://teagasc.ie/wp-content/uploads/media/website/publications/2021/Nitrates-Modelling-Final.pdf. (Accessed: November 10 2025)

excretion and hence the concentration of nitrogen in urine. However, the NAP does not address the spatial and seasonal aspects of how urine deposition drives nitrate loss, nor does it include grazing or stocking controls linked to soil type and rainfall.

Recommendation:

SWAN recommends that the Sixth NAP explicitly recognise urine-patch leaching as a primary nitrogen-loss pathway and introduce targeted measures to manage it. These should include:

- seasonal and spatial grazing controls and management practices in high-risk catchments identified through EPA FLAG and PIP mapping;
- research and pilot programmes on mitigation options, including nitrification inhibitors and precision grazing management, to inform future policy development.

5.3 Stronger Controls on Phosphorus and Sediment

While the draft NAP prioritises nitrogen, phosphorus and sediment remain the leading causes of ecological failure in many rivers, lakes, and estuaries, particularly in poorly drained catchments. The draft acknowledges this risk but continues to apply generic national measures that do not reflect the spatial distribution of phosphorus pressures.

Phosphorus pollution remains insufficiently addressed in the draft Sixth NAP. While the Waters for Life project measure-effectiveness assessment highlights that P losses are driven by overland flow, farmyard and trackway pathways, and small areas of Critical Source Areas, the draft NAP does not introduce any new structural or targeted actions to interrupt these pathways. There is no requirement for CSA-specific mitigation, no strengthening of buffer widths in high-risk P catchments, and no enhanced farmyard standards to address the most common NAIP non-compliances relating to soiled water and yard runoff. The most effective P measures identified in Waters for Life, such as interception features, runoff controls, sediment traps, and pathway cut-offs, are absent from the draft Programme. [48] [49] A targeted P pathway strategy is required alongside reducing nutrient loading at source.

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[48] Waters of Life. (2023) Waters of LIFE Framework of Measures for HSO River Water Bodies. Measures Framework. Agricultural Measures Effectiveness Table. Available at: https://www.watersoflife.ie/app/uploads/2023/08/Measures_Framework.pdf (Accessed: 11 November 2025)

[49] Good farmyard management addresses the oft-overlooked point sources of phosphorus on farms. While field runoff is a major contributor to diffuse P pollution, direct discharges from farmyards (e.g. yard runoff, silage effluent, leaking slurry tanks) can cause severe local impacts. In fact, one study found *the greatest risk of P loss in some catchments was from ditches connecting farmyards directly to streams*, acting as high-concentration conduits. See: Opoku, D.G., et al (2024). An integrated connectivity risk ranking for phosphorus and nitrogen along agricultural open ditches to inform targeted and specific mitigation management. Frontiers in Environmental Science, 12:1337857. Available at: https://www.universityofgalway.ie/media/gene/files/Opoku-et-al.-Frontiers_2024.pdf [Accessed: 12 November 2025]

In addition, the NAP is primarily mandated under the Nitrates Directive to control nitrogen and phosphorus losses, however, sediment mobilisation is a major pathway for nutrient pollution in many catchments. Measures that intercept sediment flow such as enhanced buffer zones, riparian rewetting, and livestock exclusion from soft margins are therefore integral to achieving the NAP's nutrient reduction objectives and should be explicitly recognised within the NAP.

Recommendations:

1. The Sixth NAP should explicitly include sediment-loss prevention within its scope, aligned with EPA FLAG and Pollution Impact Potential mapping, which identifies phosphorus and sediment-risk areas as priority locations for targeted measures.
2. Because a disproportionate share of phosphorus losses originates from a small number of high-risk fields and yard-connected pathways, nutrient management plans should require Critical Source Area (CSA) mapping. Where CSAs are identified, plans should apply spatially targeted measures such as variable-width riparian buffers, setbacks along headwaters and drains, and interruption of high-risk pathways including tracks, roadways and yard drainage routes.
3. Legal buffer, setback and stock-exclusion requirements should extend to small watercourses and mapped drains that convey field or yard runoff, not only main channels. Priority should be given to areas overlapping CSA polygons.
4. Yard infrastructure standards (sealed yards and effluent channels, roofed or covered collection systems where feasible, and full removal of direct drainage to open ditches) should be formally integrated into NAIP specifications and inspection protocols. In high P-risk catchments, these upgrades should be mandatory and time-bound to ensure timely compliance.

5.4 Integrating Climate Resilience and Future-Proofing the NAP

The draft Sixth NAP makes only passing references to climate change in its policy context and does not include any explicit climate-resilience measures. While the evidence highlights weather extremes as drivers of nutrient loss, it appears that future hydrological conditions have not been considered in the design of the proposed measures. There is no requirement to stress-test measures against more severe rainfall scenarios, no dynamic (weather-responsive) nutrient-spreading controls, and no planning for the increased storage or land-spreading constraints associated with more volatile winters.

Extreme rainfall, saturated winters, drought/rewet cycles and rapid wetting-up are major triggers for nitrate mobilisation, especially in heavily stocked, free-draining catchments. This also means that uniform rules cannot capture the variability in risk and measures designed around past climate norms will not work in future conditions.

Under such conditions, the single most effective form of climate resilience is reducing total nitrogen loading at source in the first instance. Without lowering the volume of nitrogen in the system, more extreme weather will continue to amplify losses.

Recommendations:

1. Prioritise reduction of nitrogen loading at source as the primary climate-resilient mitigation measure.
2. Require the NAP to integrate climate-risk and hydrological stress-testing into all regulatory and non-regulatory measures.
3. Introduce dynamic, weather-responsive nutrient-spreading rules. Replace uniform, calendar-based restrictions with controls based on soil moisture, rainfall forecasts and runoff risk. Nutrient application should be prohibited during high-risk hydrological conditions regardless of date, particularly on free-draining and high-stocking platforms where nitrate mobilisation is greatest.

6 Appendix

6.1 Need for a Robust Evidence Base and Transparent Assessment of Effectiveness

In previous submissions on the development of the NAP, SWAN has consistently emphasised the need to ground mitigation measures in a robust scientific and evidence base.

While the draft Sixth NAP contains contextual information on agriculture, water quality trends, and related policy linkages, it falls far short of demonstrating beyond reasonable scientific doubt that the proposed measures will deliver the nutrient reductions required to achieve WFD and Habitats Directive objectives. The accompanying Natura Impact Statement (NIS):

- Fails to meet the legal or scientific standards required under Article 6(3) of the Habitats Directive.[50] While the NIS provides a broad overview of pressures and identifies mitigation measures, it adopts a procedural rather than substantive approach, relying heavily on assumptions regarding the future success of implementation, enforcement, and advisory schemes. EPA data show persistent non-compliance rates of over 40% under the GAP

[50] Under Article 6(3) of the Habitats Directive (92/43/EEC), any plan or project likely to have a significant effect on a Natura 2000 site must undergo an *appropriate assessment* of its implications for the site's conservation objectives. The competent authority may approve the plan or project only after ascertaining, on the basis of the best scientific evidence, that it will not adversely affect the integrity of the site. (European Union (1992) *Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive)*, OJ L 206, 22.7.1992, pp. 7–50.)

regulations and widespread enforcement challenges.[51] By assuming full compliance, the NIS underestimates risk and fails to meet the legal threshold of certainty.

- Assumes that stricter conditions attached to the nitrates derogation will ensure environmental protection, even though these same conditions have failed to improve water quality over multiple NAP cycles. This approach conflicts with the precautionary principle and the requirement under Article 6(3) for evidence-based exclusion of harm.
- Fails to identify and assess the European Sites most likely to be affected by nutrient and ammonia pressures. High-risk SACs such as the Slaney, Nore, Barrow and Blackwater, which support freshwater pearl mussel, lamprey and salmon, are referenced only generally, with no site-specific impact analysis or mapping of nutrient pathways. The in-combination effects assessment is similarly descriptive, listing related plans and programmes (CAP Strategic Plan, Food Vision 2030, River Basin Management Plan, Climate Action Plan) without any quantitative modelling of cumulative nutrient loads. This omission is significant given Ireland's widespread exceedance of critical nitrogen and phosphorus loads across Natura 2000 sites.
- Treats ammonia emissions particularly weakly. The NIS acknowledges that 81% of SACs and 78% of SPAs already exceed ammonia critical levels – primarily due to agriculture – yet proposes no new measures beyond voluntary promotion of protected urea. There are no quantified reduction targets, no spatial prioritisation, and no link between ammonia mitigation and Natura 2000 conservation objectives.
- Fails to present a transparent, quantitative assessment of the outcomes of the Fifth NAP, including the results of the interim review and how those findings have informed the design of new measures.
- Although the draft Fifth NAP stated that an interim review was undertaken and used to develop additional measures, SWAN cannot locate a publicly accessible version of that review containing detailed methodology, a clear gap-analysis, quantified impact projections or an enforcement-findings summary. Without such a transparent evidence base, stakeholders cannot reliably assess whether the draft Sixth NAP is capable of delivering the reductions of up to 38% in nitrogen load required in certain catchments, as identified by the EPA's latest catchment analysis.[52]

SWAN notes that the Strategic Environmental Assessment (SEA) Environmental Report accompanying the draft Sixth NAP identifies several weaknesses in the plan's environmental effectiveness, particularly the lack of quantified nutrient-reduction targets, insufficient linkage

[51] Environmental Protection Agency (EPA) (2024) *National Agricultural Inspection Programme: Summary Report 2024*. Wexford: Environmental Protection Agency. Available at: https://www.epa.ie/publications/compliance--enforcement/public-authorities/national-agricultural-inspection-programme-naip-summary-report-2024.php (Accessed: 8 November 2025).

[52] Environmental Protection Agency (EPA) (2025) *Evidence-based targeting of agricultural measures to reduce nitrogen in catchments to achieve water quality objectives*. Wexford: Environmental Protection Agency. Available at: https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/Nitrate_Reductions_and_FLAG_Map_July2025_F01.pdf (Accessed: 8 November 2025).

between measures and outcomes, and continuing high levels of farm non-compliance (42% under the 2024 NAIP). While the SEA recognises the need for strengthened measures and independent, evidence-based evaluation of NAP effectiveness, these recommendations have not been operationalised in the draft programme. The SEA also highlights data and knowledge gaps, limiting the robustness of its assessment, and acknowledges that significant environmental change will be required to achieve compliance with the Nitrates and Water Framework Directives.

SWAN considers that the SEA relies too heavily on procedural integration with the Appropriate Assessment and does not provide a critical appraisal of whether the draft NAP, as currently designed, can deliver the environmental objectives it identifies. The absence of these mechanisms means that the SEA, while comprehensive in scope, ultimately reinforces the draft NAP's structural weaknesses by deferring real corrective action to future cycles.

In summary, SWAN finds that the draft Sixth NAP, while more detailed in presentation, remains insufficiently evidence-based in its demonstration of effectiveness, and that the accompanying NIS fails to demonstrate beyond reasonable scientific doubt that the plan will not adversely affect the integrity of European Sites.

Recommendation:

- SWAN urges that the Department withhold adoption of the NAP until a revised, evidence-based NIS is prepared that fully accounts for existing deterioration, cumulative impacts, and binding mitigation measures capable of achieving the restoration of European Sites to favourable conservation condition.

6.2 Comment on the public consultation process

SWAN is concerned that the consultation process for the draft Sixth NAP does not meet the standards for public participation required under the Aarhus Convention. The current consultation period of just four weeks is inadequate to allow for meaningful engagement on a complex, multi-volume policy document. In our submission on the Fifth NAP, SWAN urged that future consultations provide at least eight weeks and be underpinned by continuous, inclusive engagement with all stakeholders, not limited to the agriculture sector.[53] The draft NAP does not indicate that broad, continuous engagement with all stakeholders has taken place. It appears to draw primarily on the work of the Nitrates Expert Group and the Agriculture Water Quality Working Group. While both bodies play an important role in providing technical and sectoral input, their composition is largely limited to government, agency, and sectoral interests, with

[53] Sustainable Water Network (SWAN) (2024) *Response to Public Consultation on Proposed Additional Measures for the Fifth Nitrates Action Programme*. Dublin: Sustainable Water Network. Available at: https://www.swanireland.ie (Accessed: 8 November 2025).

limited participation from environmental or civil society organisations. SWAN reiterates that genuine, balanced public participation is essential to building trust and ensuring effective, evidence-based policy outcomes.