

# Sustainable Water Network (SWAN)

## Public Consultation 2019 Nitrates Derogation Review

- Response to Public Consultation -



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Sustainable Water Network (SWAN)

9 Upper Mount Street,

Dublin 2

[info@swanireland.ie](mailto:info@swanireland.ie)

(01) 642 55 83

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## 1. Introduction to SWAN

The Sustainable Water Network (SWAN) is an umbrella network of 24 of Ireland's leading environmental NGOs, national and regional, working together to protect and enhance Ireland's aquatic resources through coordinated participation in the implementation of the Water Framework Directive (WFD), Floods Directive, Marine Strategy Framework Directive (MSFD) and other water-related policy and legislation. SWAN member groups are listed in Appendix I. SWAN has been actively engaged in Water Framework Directive (WFD) and other water policy implementation at both national and River Basin District (RBD) level since 2004, responding to water-related public consultations and representing the environmental sector on the Irish Water Stakeholder Forum, the National Rural Water Services Committee, the Public Water Forum and the National Water Forum. In 2012 SWAN published the report *'The Common Agricultural Policy (CAP): Interactions with the Water Framework Directive (WFD) and implications for the status of Ireland's waters'*. SWAN has responded to the last 3 reviews of the Nitrates Action Plan in 2017, 2013 and 2010.

## 2. Policy context: Achieving Nitrates Directive and WFD compliance and the role of the Nitrates Derogation

The consultation document, and its questions, is focused almost exclusively on individual on-farm management measures for derogation farmers. However, SWAN believes that it is imperative to place this nitrates derogation review, and this consultation, within its policy context if public engagement in the process is to be meaningful and the review of the derogation to be effective. In order to do this, some fundamental contextual information is required:

1. What exactly is the nitrates derogation? This is not adequately explained in the consultation document;
2. How does it fit within the context of the Nitrates Action Programme (NAP) and what is the legislative and policy under-pinning? (e.g. GAP Regulations; Nitrates Directive; Commission Implementing Decision)?
3. Where are the derogation farms and how is this broken down by county and catchment?
4. What impact, if any, has the application of derogations had on water quality in the catchments of derogation farms to date?

5. What impact will the further expansion in derogation farming have on the state of Ireland's waters generally, and on the status of water-bodies in catchments of derogation farms?
6. Does the granting of the derogation have an impact on the meeting of Nitrates Directive and Water Framework Directive (WFD) obligations?
7. How is nutrient loss from derogation farms prevented when no consideration of physical and hydrological conditions are included in the derogation requirements?
8. In terms of implementation of the derogation, what is the rate of compliance and what is the nature of non-compliances?

There is no information provided in the public consultation document to answer the above questions which we believe seriously compromises the consultation. SWAN recommends that the above information be provided to support a fully informed review of the derogation in the next 12 months.

In relation to the policy context<sup>1</sup>, it is important to stress that underpinning the derogation, is the **Nitrates Directive**, which is one of the key instruments for the protection of waters against agricultural pressures. Under it, Ireland is required to meet the objective of "*reducing water pollution caused or induced by nitrates [and phosphates] from agricultural sources and preventing further such pollution.*" In order to achieve this, the directive further requires the implementation of "*measures [that] will ensure that, for each farm or livestock unit, the amount of livestock manure applied to the land each year, including by the animals themselves, shall not exceed ... the amount of manure containing 170 kg N.*" To allow the extremely high growth projections for agri-industry, which would otherwise not be possible, Ireland, has secured a derogation from this requirement. Most recently this was granted in a European Commission Implementing Decision<sup>2</sup> "*subject to certain strict individual conditions that should apply to farmers covered by the authorisation.*" on the condition the achievement of the Directives objective was not prejudiced. This document then, along with the regulations transposing the Implementing Decision<sup>3</sup> provides the legal underpinning for the derogation and sets out the conditions under which Ireland can avail of the derogation.

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<sup>1</sup> We will address questions 3-7 regarding information on the impact of the derogation on water quality in Section 3 below

<sup>2</sup> European Commission (2018) COMMISSION IMPLEMENTING DECISION (EU) 2018/209 of 8 February 2018 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 Brussels.

<sup>3</sup> Government of Ireland (2018) *European Union (Good Agricultural Practice for Protection of Waters) (Amendment) Regulations 2018*. Dublin

It is important that all the requirements of the Decision and Regulations are set out as part of the next phase consultation which SWAN recommends. It is also important to note that according to the EPA<sup>4</sup>, delivering the “.. *agricultural expansion envisaged by FoodWise 2025 while protecting our water environment presents a very significant challenge for Ireland.*”

Because the application of the nitrates derogation is intrinsically linked to the Nitrates Action Programme, it is important to also take the **wider context of the Good Agricultural Practice for Protection of Waters (GAP) Regulations**<sup>5</sup> into consideration when reviewing the derogation. This is because pollution from derogation farms is controlled in the first instance by the basic provisions of the GAP regulations, with the conditions of the derogation providing a secondary layer of controls. In this regard, SWAN has extremely grave concerns about the inadequacies of the GAP regulations, which in turn undermine the ability of derogation conditions to control nutrient run-off from derogation farms. These were comprehensively set out in the SWAN submission<sup>6</sup> on the NAP in 2017 and we refer the Departments of Housing, Planning and Local Government (DHPLG) and the Department of Agriculture, Food and Marine (DAFM) to this. While these may be a wider issue, we urge you to consider them in the context of setting standards for control of nutrient loss from derogation farms also.

The implementation of the Nitrates Directive is the ‘basic measures’ for addressing water pollution from agriculture under the **Water Framework Directive** (WFD); the additional requirements of the WFD are well rehearsed elsewhere but include the attainment of ‘good’ status for all surface and groundwater bodies and the prevention of their deterioration (unless exemptions, under strict criteria, are applied) Any review of the nitrates derogation then, must be conducted against those requirements. Therefore a review of the derogation must include a full assessment of the effectiveness of the derogation stipulations in protecting the aquatic environment from the increased nutrient inputs on derogation farms, and in thus in ensuring compliance with WFD standards in associated waterbodies (See Section 3 for more on this).

To increase transparency regarding these crucial contextual issues, we would like to re-iterate the following recommendation made by the EPA in their submission on the 4<sup>th</sup> NAP and SEA<sup>7</sup>:

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<sup>4</sup> EPA (2017) Submission on Draft 4th Nitrates Action Programme and associated SEA Environmental Report. Wexford

<sup>5</sup> Government of Ireland (2017) European Union (Good Agricultural Practice for Protection of Waters) Regulations 2017. Dublin

<sup>6</sup> SWAN (2017) *Third Review of Ireland’s Nitrates Action Programme, Response to Public Consultation*. Dublin.

<sup>7</sup> EPA (2017) [Submission on Draft 4th Nitrates Action Programme and associated SEA Environmental Report](#). Wexford

*"In the interest of providing clarity on the status, contents and implementation of the NAP, we recommend the preparation of a separate free standing document, in effect the Nitrates Action Programme document, to accompany the final GAP Regulations. This document should provide an overview of the revised GAP Regulations, including the proposed new measures, and clearly set out the Key Actions, Controls, Design Standards, Responsibilities, Monitoring and Reporting commitments which will ensure the delivery of the outcomes envisaged by the GAP Regulations."*

SWAN recommends that this document should be developed with an additional section on the nitrates derogation, to support informed consultation on both the derogation and, in due course, the 5<sup>th</sup> NAP.

The EPA in the same submission<sup>8</sup>, also draw attention to *"..some 58 mitigation measures/recommendations [which] are proposed in the SEA Environmental Report and Natura Impact Statement but [which] do not appear to have been integrated into the GAP Regulations"*. These measures are set out in Table 4-2 of the SEA Statement<sup>9</sup> where it is clear that only 3-4 recommendations resulted in even slight changes to the GAP Regulations. The EPA goes on in their submission to recommend *"..that the mitigation measures and other recommendations in the SEA Environmental Report and Natura Impact Statement should be reviewed and integrated into the GAP Regulations/NAP as appropriate"*. It is extraordinary to SWAN, that almost none of 58 measures recommended in a comprehensive Environment Report, and endorsed by the state's environmental agency, were reflected in the final GAP regulations, despite a thorough rationale for their inclusion being presented. Whilst this relates more widely to the NAP, for the reasons stated above, it is also fundamental to an effective foundation of the derogation, since it relates to a suite of nutrient control measures on derogation (in addition to non-derogation) farms, which were recommended but not taken up.

## WATER STATUS, RISK & TRENDS

It is clear from the River Basin Management Plan that agriculture is by far the most prevalent pressure on the freshwater environment. As a result of the detailed catchment characterisation undertaken by the EPA, agriculture *"has been identified as a significant issue"* in 67% of 'At Risk' river and lake waterbodies.

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<sup>8</sup> *ibid*

<sup>9</sup> Government of Ireland (2018) *Strategic Environmental Assessment Statement For Ireland's Nitrates Action Programme*. Dublin.

This supports the EPA State of the Environment Report, which, citing the 2015 EPA water quality report,<sup>10</sup> identifies agriculture as one of “*the two most important suspected causes of pollution in rivers accounting for 53% of cases...*” This compares with 34% of cases attributed to municipal sources, the next most significant pressure<sup>11</sup>.

As is clearly stated in the consultation document<sup>12</sup>, “*..there was no overall improvement in water quality over the first river basin cycle (2009-2015)..*” and the recent EPA Water Quality Indicators report<sup>13</sup> reports “*.. a 3% reduction in river water quality since 2015*” and “*an increase in the percentage of sites with higher phosphorus concentrations that could lead to pollution, from 26.6% to 37.2% .. The increase in river phosphorus concentration is a worrying development.*”

Map 5 in this report shows **upward trends in phosphate concentrations** at river sites<sup>14</sup> in counties such as Cork and Waterford which SWAN understands coincide with an increased concentration of derogation farms. In addition, Map 11, illustrating winter dissolved inorganic nitrogen levels in estuarine and coastal waters 2015–2017, clearly shows exceedances, again on the South Coast. These trends raises significant concerns in the context of the derogation review and emphasise the need for more data to support it, which we deal with in the next section.

### **3. Evidence-base for Nitrates Derogation: No evidence that the Nitrates Derogation conditions constitute effective measures for prevention of nutrient loss**

From the perspective of achieving compliance with the ND and the WFD, the key question in relation to the derogation is whether its increasing application is compromising the quality and status of water bodies in the catchments of derogation farms. To be more specific, it is worth re-iterating the information which we believe is necessary to support a meaningful consultation:

- What impact, if any, has the application of derogations had on water quality in the catchments of derogation farms to date?

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<sup>10</sup> EPA 2016 Ireland’s Environment – An Assessment 2016 Environmental Protection Agency, Wexford

<sup>11</sup> *ibid*

<sup>12</sup> Government of Ireland (2019) *Public Consultation 2019 Nitrates Derogation Review*. Dublin

<sup>13</sup> O’Boyle, B. & Trodd, W. (2018) *Water Quality in 2017: An Indicators Report*. EPA, Wexford

<sup>14</sup> for the period 2007–2017

- Where are the derogation farms and how is this broken down by county and catchment?<sup>15</sup>
- What impact will the further expansion in derogation farming have on the state of Ireland's waters generally, and on the status of water-bodies in catchments of derogation farms?
- Does the granting of the derogation have an impact on the meeting of Nitrates Directive and Water Framework Directive (WFD) obligations?
- How is nutrient loss from derogation farms prevented when no consideration of physical and hydrological conditions, nor transport interception measures, are included in derogation stipulations?

No such supporting information is furnished as part of the consultation and thus clearly the evidence to support the environmental sustainability or otherwise of the derogation is not provided. In SWAN's view there are two main issues which constitute significant weaknesses in the nitrates derogation:

### **1. INADEQUATE MONITORING, AT SUFFICIENT SCALE, OF DEROGATION FARMS AND ADJOINING WATER BODIES**

Article 8 of the Implementing Decision requires that *"The competent authorities shall monitor soil, surface water and groundwater .... at farm field scale.."*. It further requires that they *"..conduct reinforced water monitoring in agricultural catchments located in proximity to the most vulnerable water bodies."* and that *"Information and data collected from nutrient analysis ... be used for model-based calculations of the magnitude of nitrate and phosphorus losses from grassland farms covered by authorisations"*.

While trends are emerging, SWAN does not believe that current water quality monitoring carried out by the EPA and Local Authorities is at a sufficient spatial and temporal scale to determine whether there is an impact on water quality and WFD status from the nitrates derogation. In other words, we do not have the information we need to determine whether or not the application of the derogation is compromising WFD obligations and causing water pollution. This information must be attained, made publicly available and closely analysed as part of the derogation review.

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<sup>15</sup> SWAN notes that the Commission Implementing Decision requires the generation of such data, including in map form

## **2. NO CONSIDERATION OF NUTRIENT PATHWAYS, LACK OF INTEGRATION WITH EPA WATER RISK ASSESSMENTS AND NO MEASURES PROPOSED TO ADDRESS LOSSES AT LOCAL LEVEL**

To assess the adequacy of the nitrates derogation, it is necessary to also look at the effectiveness of the GAP Regulations in protecting the aquatic environment, under the requirements of the Nitrates Directive and the Water Framework Directive (WFD). Two significant state-sponsored monitoring and research programmes<sup>16</sup> were developed to do exactly this, and both have found that the Nitrates Regulations are insufficient to protect water from agricultural impacts. This applies equally to the nitrates derogation because it is based on the same nutrient management system: The assessed risk of nutrient loss from soils to water from derogation farms is based almost entirely on soil phosphorus levels measured by the standard soil Phosphorus test, which was developed as an agronomic indicator of P requirements for crop growth and not for assessing the desorption of phosphorus from soils. Over time, it has come to be used to indicate risk of P loss from agricultural areas;<sup>17</sup> however, as indicated by Irvine & Ní Chuanáigh,<sup>18</sup> *“The adequacy of soil index 3 as a reasonable threshold to be used for the protection of surface and groundwaters is unproven”*. The lack of linkage between Soil P and water quality is also highlighted in the Natura Impact Statement For Ireland's Nitrates Action Programme<sup>19</sup>.

**Critical Source Areas, not Soil P thresholds, must be at the centre of a new strategy to manage agricultural water pollution, including on derogation farms.**

The current measures in the Regulations and in the derogation conditions aim to reduce the risk of diffuse nutrient loss to water by primarily setting phosphorous input limits, linked to livestock units and based on the soil P index, while allowing soil phosphorus levels across all catchments to increase to Index 3, and indeed to Soil P 4 in certain conditions. **A significant omission from the derogation conditions is any consideration of pathway risks.**

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<sup>16</sup> EPA Catchment Characterisation Programme (and associated EPA Water Quality monitoring) and Teagasc Agriculture Catchments Programme

<sup>17</sup> Daly, K. (2005) 'Evaluating Morgan's Phosphorus Test as an Environmental Indicator'. Teagasc - Project Report - 4976

<sup>18</sup> Irvine, K. and Ní Chuanáigh (2011) Management Strategies for the Protection of High Status Water Bodies: A Literature Review. STRIVE Report (2010-W-DS-3). Environmental Protection Agency, Wexford.

<sup>19</sup> Government of Ireland (2018) *Natura Impact Statement For Ireland's Nitrates Action Programme*. Dublin

Transfer pathways have been highlighted as a major factor in determining the risk of nutrient loss to waters by research over many years by both the EPA and Teagasc.<sup>20,21</sup> There is a high risk of nutrient loss from agricultural soils when pressures from nutrient sources coincide with pathways of nutrient transfer. Nutrient source pressures and transfer pathways vary considerably throughout different catchments and regions of the country<sup>22</sup> and Archbold *et al.*<sup>23</sup> have defined hydrological pathway categories for the Irish landscape. Nitrate is highly mobile in soil water and is typically leached from a surface source to groundwater and enters a waterbody via subsurface pathways. This occurs in free-draining soil.<sup>24</sup> On the other hand, Phosphorus transfer pathways are dominated by overland flow on poorly draining soil, but may also leach into groundwater, and are very much dictated by diffuse sources from rainfall-events.<sup>25,26</sup> Transfer pathways within a catchment depend on soil permeability and geology. In a study of five Irish catchments of varying soil type and P and N transfer risk, significant differences were found in P attenuation and loss between catchments.<sup>27</sup> The less intensive catchments that had a lower proportion of Index 4 fields, and which therefore may be considered less risky, in conjunction with their soil hydrology properties actually posed a greater risk to waterbodies.<sup>28</sup> The catchments with permeable soils were dominated by subsurface N transfer pathways and those of poor-moderate drained soils were characterized by near-surface and surface P pathways.<sup>29</sup> Interestingly, the ACP Report states that “A grassland catchment with a flashy hydrology had three times higher annual P loss than an arable, mostly groundwater fed catchment despite the latter having higher soil P sources prone to losses.”<sup>30</sup>

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<sup>20</sup> Archbold, M., Bruen, M., Deakin, J., Doody, D., Flynn, R., Kelly-Quinn, M., Misstear, B. and Ofterdinger, U. (2010) *Contaminant movement and attenuation along pathways from the land surface to aquatic receptors-a review*. STRIVE Report No. 56. Environmental Protection Agency, Wexford.

<sup>21</sup> Teagasc (2017) Agricultural Catchments Programme Phase 2 Report. Teagasc, Wexford

<sup>22</sup> Archbold, M., Bruen, M., Deakin, J., Doody, D., Flynn, R., Kelly-Quinn, M., Misstear, B. and Ofterdinger, U. (2010) *Contaminant movement and attenuation along pathways from the land surface to aquatic receptors-a review*. STRIVE Report No. 56. Environmental Protection Agency, Wexford.

<sup>23</sup> *ibid*

<sup>24</sup> Jiao, P., Xu, D., Wang, S., Wang, Y., Lin, K., and Tang, G. (2012) ‘Nitrogen loss by surface runoff from different cropping systems’. *Soil Research*. 50: 58-66.

<sup>25</sup> Jordan, P., Arnscheidt, A., McGrogan, H. and McCormick, S. (2007) ‘Characterising phosphorus transfers in rural catchments using a continuous back-side analyzer’. *Hydrology and Earth System Sciences*. 11(1): 372-381.

<sup>26</sup> Jordan, P., Melland, A.R., Mellander, P.E., Shortle, G. and Wall, D. (2012) ‘The seasonality of phosphorus transfers from land to water: Implications for trophic impacts and policy evaluation’. *Science of the Total Environment*. 434: 101-109.

<sup>27</sup> Wall, D.P., Murphy, P.N.C., Melland, A.R., Mechan, S., Shine, O., Buckley, C., Mellander, P.E., Shortle, G. and Jordan, P. (2012) ‘Evaluating nutrient source regulations at different scales in 5 agricultural catchments’. *Environmental Science and Policy*. <http://dx.doi.org/10.1016/j.envsci.2012.06.007>.

<sup>28</sup> *ibid*

<sup>29</sup> Mellander, P.E., Melland, A.R., Jordan, P., Wall, D.P., Murphy, P.N.C and Shortle, G. (2012) ‘Quantifying nutrient transfer pathways in agricultural catchments using high temporal resolution data’. *Environmental Science and Policy*. <http://dx.doi.org/10.1016/j.envsci.2012.06.004>.

<sup>30</sup> Teagasc (2017) Agricultural Catchments Programme Phase 2 Report. Teagasc, Wexford

EPA peer-reviewed research, published as part of their catchment characterisation work (Deakin et al., 2016),<sup>31</sup> concludes that *“achieving successful WFD outcomes depends on having a site-specific, three-dimensional understanding of contaminant transfer pathways”* and that *“Where P is the limiting nutrient, as it is in the majority of Irish freshwaters, reducing the diffuse source load as a measure on its own is unlikely to result in improved water quality outcomes”*. This paper also concludes that *“One of the key principles adopted for the river basin management planning process in Ireland, moving into the second cycle, is **putting ‘the right measure in the right place’** ... Characterising the nature of the hydro(geo)logical pathway linkages, and the nature of that pathway, provides a critical part of the evidence base for selecting the most effective measures.”* (SWAN’s emphasis). Supporting this, Shore et al<sup>32</sup> states that *“**Identification of surface hydrological connectivity at scales where critical source areas (CSAs) can be managed is fundamental to achieving effective management of phosphorus loss in agricultural catchments.**”* (SWAN’s emphasis)

From the above research it is clear that **interception of the nutrient transport pathway must be central to mitigating nutrient loss and controlling pollution from derogation farms**. It also shows that the pressure (or livestock units (LUs)) is not the primary driver in areas susceptible to P loss, again highlighting the fact that the nitrates derogation, which is based on LUs, will not adequately deal with the impact on water bodies of phosphate arising from farming and that mitigation measures need to focus on pathway interception, particularly in the CSAs or ‘hot spots’ for phosphate runoff. It is crucial that a means of implementing such measures is developed and implemented, and that this must not rely solely on voluntary initiatives in selected catchments.

The EPA Catchments Unit has developed two extremely pertinent maps that show the susceptible areas and the critical source areas for phosphate loss to surface water: the Susceptibility of Surface Water Impact by Phosphate maps and Pollution Impact Potential Maps (PIP) for Phosphate to Surface Water. These provide robust information on the potential CSAs at sub-catchment scale which should be used to make the Nitrates Derogation much more effective. This is supported by the NAP SEA<sup>33</sup> which

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<sup>31</sup> Deakin, J., Flynn, R., Archbold, M., Daly, D., O'Brien, R., Orr, A., and Misstear, B. (2016) Biology and Environment: Proceedings of the Royal Irish Academy, Vol. 116B, No.3 pp. 233-243

<sup>32</sup> Shore, M., Murphy, P.N.C., Jordan, P., Mellander, P-E., Kelly-Quinn, M., Cushen, M., Mehan, S., Shine, O., Melland, A.R. (2013). Evaluation of a surface hydrological connectivity index in agricultural catchments. Environmental Modelling and Software. 47, 7-15.

<sup>33</sup> Government of Ireland (2018) *Strategic Environmental Assessment Statement For Ireland's Nitrates Action Programme*. Dublin.

recommended that “..the Teagasc online NMP system is updated to link with the EPA’s WFD web Application..” to facilitate “..detailed assessment”.

The EPA characterisation process has also generated maps of ‘At Risk’ waterbodies, which are included in the WFD App. and SWAN believes that the Nitrates Derogation should take account of this and impose more stringent requirements on derogation farms in the catchment areas of At Risk water bodies, where land has been assessed as susceptible to nutrient loss.

It is also important to seriously consider the possibility that very intensive farming ( $\geq 171$  kg) may not be feasible in areas of high P susceptibility, even with mitigation measures, and that certain sub-catchment areas may need to be zoned ineligible for derogation farming.

## 4. Consultation Process

SWAN welcomes the opportunity to input to this consultation and in addition acknowledges the extension to the deadline. However, as an advocate of the effective engagement of all stakeholders in water-related policy, SWAN believes that the quality of the consultation is poor. Notwithstanding the useful brief information in the consultation document on trends in water quality and derogation applications etc. adequate contextual information is not provided, as we have outlined in preceding sections. Nor is the wider context explained which is vital to a meaningful consultation, with the consultation focused in a limiting way on specific on-farm management matters.

In addition, the objective of the consultation is not clear, nor how inputs will be incorporated, nor the nature of the further decision-making process regarding the derogation. Furthermore, the language used in places in the consultation document is somewhat ‘leading’ and based on some unproven assumptions. This is not best practise in public engagement, which should provide background information in an objective way in order to allow consultees to form their own opinion. For example, the consultation document states that the “.. high yield of grass and crops..” on Irish farms leads to “..a highly sustainable production system..”. There is no underpinning data to support this interpretation and an argument for a counter position could equally be made. It also states that the review will “..examine further opportunities for farmers to **improve** efficiencies and **continue to reduce** their environmental footprint”. This demonstrates a clear point-of-view that farmers are already currently reducing their environmental impact when, again, a counter argument could be made based on recent increases in

nutrients detected in waterbodies in catchments where intensification has been greatest. The next phase of the consultation should avoid subjective statements and focus on objective presentation of information only.

## **5. Responses to consultation questions:**

### **5.1 *Our livestock systems are based on the maximum utilisation of grassland. How can we increase the efficiency of grassland management on derogation farms, while protecting the environment?***

SWAN does not have expertise in grassland efficiency and so is not in position to this question.

### **5.2 *How can livestock manure be best managed to ensure its impact on the environment is minimised?***

In the first instance, it must be ensured that at the national level, the volume of manure being produced by the national herd does not exceed that which can be safely land-spread or otherwise managed in a way that does not cause water pollution or environmental damage. When taking into account the 'assimilative capacity' of the area of land available for land-spreading, excluding the proportion which is unsuitable due to nutrient loss susceptibility, the evidence does not yet exist that the volume of manure to be produced nationally under FoodWise 2025 is environmentally sustainable from a water quality / WFD perspective.

On-farm best practice techniques are subsidiary to this fundamental issue. The effectiveness of on-farm technical solutions will be limited if taking place within a flawed system where there may well be a fundamental mis-match between the volume of organic nutrients in the form of slurry and the ability of the national agricultural land-bank to take it up.

### **5.3 *How should agricultural impact on soil be minimised on derogation farms?***

No comment. SWAN does not have the necessary expertise in soil science to respond.

### **5.4 *What specific actions can derogation farms take to minimise their impact on the environment***

1. Maintain a buffer zone of a minimum of 10m along surface watercourses, within which inorganic fertiliser should not be spread;

2. For the spreading of organic fertilisers, plots with a slope less than 10% should have a minimum distance of 10m and those with a slope of greater than 10%, a minimum distance of 20m between a watercourse and spreadlands;
3. As recommended by the EPA<sup>34</sup>, introduce the measure to exclude livestock from watercourses “.. from 1 January 2020, instead of 1 January 2021. This would still allow a two-year lead in time for farmers while improving the likelihood of the measures yielding water quality benefits during the current RMBP cycle (2018-2021).”
4. Do not spread slurry on soils of Soil P 4 or over – export slurry where necessary to avoid this;
5. Conduct soil tests every 2-3 years;
6. Only spread slurry when no rain is forecast for 96 hours. There is no evidence that 48 hours is adequate to protect against loss to watercourses;
7. Introduce nutrient interception measures, tailored to the on-farm physical and hydrological conditions. These should be mandatory for derogation farms where nutrient or other water pollution impacts are detected. Relying on voluntary programmes such as ASSAP is not sufficient. Such mitigation actions for minimising phosphorus and sediment loss include:
  - Riparian buffers;
  - In-field grass buffer strips;
  - Hedgerows;
  - Woodlands;
  - Ponds/wetlands/constructed wetlands;
  - Mounds alongside streams.
8. Broaden the scope of local authority farm inspections for derogation farms in ‘at risk’ catchments to cover nutrient management and diffuse nutrients from landspreading, in addition to the farmyard related aspects. (This was recommended in the EPA submission on the SEA for the GAP Regulations<sup>35</sup> for all farms)
9. As also recommended by the EPA<sup>36</sup>, link this “..inspection regime with the WFD characterisation work [to] allow for better targeting of efforts at local authority level, with annual quotas of

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<sup>34</sup> EPA (2017) *Submission on Draft 4th Nitrates Action Programme and associated SEA Environmental Report*. Wexford

<sup>35</sup> *ibid*

<sup>36</sup> *ibid*

*inspections allocated to each local authority (similar to that for domestic wastewater treatment systems)."*

**5.5 *Should all intensive livestock farms be subject to the conditions of the derogation whether they apply or not?***

Yes. In catchment areas of water bodies where phosphate is a significant issue and the water quality is impacted, measures to protect from phosphate loss also need to be applied on farms where the stocking rate is 'intensive' (131-170 kg) and may even be necessary on 'moderate intensity' farms in certain catchment conditions.

## APPENDIX I

### SWAN Member Organisations

SWAN National Groups		SWAN Regional & Local Groups	
1.	An Taisce	14.	Carra Mask Corrib Water Protection Group
2.	Bat Conservation Ireland		
3.	Birdwatch Ireland	15.	Cavan Leitrim Environmental Awareness Network
4.	Coastwatch Europe Network		
5.	Coomhola Salmon Trust Ltd.	16.	Celebrate Water
6.	Eco-UNESCO	17.	Cork Environmental Forum
7.	Friends of the Earth	18.	Cork Nature Network
8.	Friends of the Irish Environment	19.	Dodder Action
9.	Irish Peatland Conservation Council	20.	Longford Environmental Alliance
10.	Irish Seal Sanctuary	21.	Macroom District Environmental Group
11.	Irish Whale and Dolphin Group	22.	River Shannon Protection Alliance
12.	Irish Wildlife Trust	23.	Save The Swilly
13.	Voice Of Irish Concern for the Environment (VOICE)		
		24.	Slaney River Trust

## APPENDIX II

### SWAN Board of Directors

<b>SWAN Board of Directors:</b>	
Mark Boyden, Chair	Coomhola Salmon Trust
Mindy O'Brien, Vice Chair	VOICE
Karin Dubsy, Director	Coastwatch Europe
David Healy, Director	Friends of the Irish Environment
David Lee, Director	Cork Environmental Forum
Elaine McGoff, Director	An Taisce
Gerry Siney, Director	River Shannon Protection Alliance