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NFGWS Submission to Department of Agriculture Food and the Marine on the Code of Good Agricultural Practise for reducing Ammonia Emission from Agriculture 2019

The National Federation of Group Water Schemes (NFGWS) is the representative organisation for the community-owned group water scheme (GWS) sector in Ireland. Since its establishment in 1997, the organisation has worked in partnership with government Departments, Local Authorities (LAs) and other statutory and non-statutory stakeholders to ensure that the services provided by our GWS members meet the highest standards in terms of water quality and customer service.

The NFGWS welcomes the opportunity to participate in this consultation process. While ammonia is rarely a major issue for drinking water suppliers, it is linked to the nitrogen cycle which can have a significant impact, particularly for groundwater. The NFGWS recently made a submission to the Department of Agriculture Food and the Marine (DAFM) on the Nitrate Derogation Review (see Appendix 1) and this document should be read in parallel with this submission.

In addition, we have some specific comments in relation to the draft consultation document itself, as follows.

- **Limiting ammonia emissions from the use of organic and inorganic fertilisers:**
  As part of the NFGWS source protection pilot project, we are working with farmers to increase riparian zones beyond the GAP regulations. However, for this to succeed, the landowners involved must not suffer any financial loss. It is important that basic support payments for landowners are not negatively impacted for farmers who are willing to take such steps to transition intensive grassland areas to a less intensive method that will protect our water environment.

  148 The preparation and use of a Nutrient Management Plan (NMP):

  Nutrient Management Planning should form the basis of fertiliser applications on all farms. This process should be further encouraged and promoted on an annual basis to help assist and inform farmers of their fertiliser requirements. The frequency of soil sampling on non-derogation farms to inform NMP is not adequate (once every 5 years) and increasing this frequency should be considered to improve the accuracy of any plan. In addition, land use change (e.g. from grassland to tillage) should be included in the plan as this could impact on the method of inorganic/organic fertiliser application. The use of NMPs allows farmers and their advisors to focus on specific soil requirements (e.g. liming to improve soil pH, use of straight fertilisers that contain no N rather than compounds). NMPs should also take account of climatic conditions, allowing the farmer to choose specific fertiliser types and application methods based on climatic conditions. Testing of organic manures to establish nutrient content is encouraged by Teagasc and this should be considered for inclusion in the development of any nutrient management plan.

  149 Limiting ammonia emissions from urea fertilisers:

  The SMART farming initiative is a positive example of how the farming sector can be persuaded adopt and implement a strategy of change by promoting key messages. Consideration should be given to the further expansion of the Smart Farming initiative to

include environmental measures such as those mentioned in the document. New technologies and practices proven to reduce ammonia emissions and minimise nitrogen loss should be considered for TAMS funding. Further research and educational programmes should be undertaken to assist farmers manage available nitrogen levels on farms (in soils and organic manure). Consideration might also be given to the revision of the soil index levels to provide more accuracy.

- **Manure application**

  Please see NFGWS Submission to the DAFM on the Nitrates Derogation Review 2019 in Appendix 1.

  In addition to the technology for manure application listed in the Code of Good Agricultural Practises for reducing Ammonia emissions from Agriculture, consideration should be given to the method of organic fertilizer preparation in advance of spreading so as to reduce ammonia release. There are currently trials taking place that have focused on the addition of pumped air (via pipes) which slowly agitate tanks in a consistent manner.[1] Further research should be undertaken to establish the benefits (if any) in terms of ammonia release from using such technologies as well as the benefit of reduced levels of water required to assist with agitation and application.

  161 Timing of application of manures:

  Manure needs to be applied when crop demand is at its highest. Unfortunately, slurry is often spread when conditions are not suitable. For example, the 16-week closed period in Zone A means that slurry can be spread in mid-January, when there is often no growth and poor weather conditions, thereby increasing the risk of run-off to watercourses. Other factors that should influence the timing of organic fertilizer application might include technology, weather, application method, land type/use/suitability, soil index, proximity to water courses, etc.

  168 Use of low emission slurry spreading (LESS) techniques to reduce ammonia emissions:

  While the use of low emission and precision methods of slurry application is positive in relation to ammonia emissions and run-off, it should also be noted that the use of such equipment requires slurry to be more dilute. This can result in large volumes of water being used for an increased volume of liquid organic manure to be spread. The use of recycled water or rainwater should be encouraged for such practices.

- **Animal feeding strategies**

  202 Extended grazing:

  An extended grazing period along with grassland management has a number of benefits, but it is important that watercourses and groundwater are not impacted by this practice due to increased damage to soil structure, poaching, run-off, etc.

- **Manure Storage**

  While there has been significant investment in slurry storage facilities, there may still be a lack of facilities on non derogation farms. Slurry being applied at incorrect times or in inappropriate conditions due to a lack of storage capacity must be avoided. The continued support for farmers to ensure that they have adequate slurry storage facilities should be maintained and improved.

[1] https://www.farmersjournal.ie/aeration-system-cuts-out-agitation-196238

If changes to farm infrastructure are required to facilitate additional storage for farmers entering more intensive farming regimes, supports should be directed towards lands that are capable of supporting such intensification.

We hope that the comments and suggestions contained in this submission will be positively considered as part of the review process. Should you require any, or further information, please contact us.

Barry Deane
CEO NFGWS

Appendix 1 – NFGWS Submission to DAFM on the 23rd May 2019

NFGWS Submission to Department of Agriculture Food and the Marine on the Nitrates Derogation Review 2019

The National Federation of Group Water Schemes (NFGWS) is the representative organisation for the community-owned group water scheme (GWS) sector in Ireland. Since its establishment in 1998, the organisation has worked in partnership with the Government Departments, Local Authorities (LAs) and other state and non-state stakeholders to ensure that the services provided by our GWS members achieves the highest standards in terms of water quality and customer service.

The NFGWS welcomes the opportunity to participate in this consultation process. Since its formation, the NFGWS has been working with farmers across the country to protect and improve water quality in GWS drinking water catchments. In recent years, we have been actively implementing phase I of a source protection strategy. This has focused on the identification and mapping of drinking water source catchments. This phase has been substantially completed for all regulated[2] group water scheme supplies with their own source. In 2018 we established a source protection pilot project phase II, which is now underway.

The NFGWS recognises the vital role that the farming community has played in the development and promotion of the group water scheme model over the years. We equally recognise the impact that agricultural practices can have on drinking water quality. We strongly believe that the GWS sector can play a significant role in mobilising communities, including farmers, to adopt practices to enhance water quality. An objective of this review should be to ensure that any decision on derogation does not negatively impact on water quality. Should measures (other than statutory obligations) be required to protect drinking water sources, in particular, associated programmes of support should be introduced to ensure that farmers do not suffer any financial loss.

The questions outlined in Appendix 1 of the consultation paper are quite specific and targeted. We do not possess sufficient scientific and technical information to answer them specifically, however we have the following responses.

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?**

   Balancing intensive agricultural production with water protection is extremely difficult. With notable exceptions, most countries have failed to achieve this balance, to the detriment of water quality and the wider environment. It is imperative that Ireland does not follow suit. In addition, given the global challenges in terms of climate change, biodiversity loss and wider environmental pressures, alternatives to further intensification should be considered that do not impact on farming income. The recent announcement of a climate and biodiversity emergency in Ireland will have to be addressed by every sector and there is an opportunity to do so as part of this review process.

   While it is understood that a grass-based system will continue as the basis of Irish Agriculture for the foreseeable future, there is a need to introduce new Agri-environmental schemes that incentivise and support farmers for farming less intensively. Certainly, there is a need to improve efficiency and practices on land that is capable of supporting intensive farming, such as improved grassland management, grass types used, use of clover swards, animal breeding etc., but there is also a need to recognise that in particular parts of this country, poorly drained soils pose a significant risk to drinking water sources in terms of nutrient loss to water supplies. Similarly, in other areas, many free draining soils pose a particular challenge in terms of nitrate

[2] GWS monitored under the Drinking Water Regulations 2017

leaching to groundwater sources. There needs to be recognition that not all soils are suitable for increased production. Farmers working on these types of soils should be supported to remain less intensive in order to protect our drinking water sources while also offering opportunities to combat climate change and support biodiversity. New incentivisation schemes are needed that provide significant financial recognition to farmers willing to farm less intensively in these areas. In parallel, derogation farming might be supported on land that is capable of sustaining intensification based on the best available science. From the initial learnings of our source protection pilot projects, a 'one size fits all' approach to intensive agriculture is not sustainable.

As part of our source protection pilot project, we are working with farmers to increase riparian zones beyond the GAP regulations. However, if this is to succeed, support for the landowner is required.

The successful SMART farming initiative is a positive example of how the farming sector can adopt and implement a strategy of change by promoting key messages to the farming community. Consideration should be given to the further expansion of the SMART farming initiative to include environmental measures such as those mentioned above.

2. How can livestock manure be best managed to ensure its impact on the environment is minimised?

Livestock manure applied to land poses a risk to drinking water supplies especially on unsuitable soils. The detection of gross levels of E coli and the presence of cryptosporidium in drinking water sources - as well as nutrient loading of surface water sources – is a concern. The delineation of drinking water catchment areas and Zones of Contribution has now been completed and these provide a valuable source of information. Efforts should be made to share this information with farmers so that they are aware of the potential threat to public health if there are pathways along which manures may migrate to drinking water sources (drains etc.). This should be supported through a series of educational and promotional programmes targeting both derogation and non-derogation farmers in drinking water catchments.

The potential to use organic manures to recover energy through anaerobic digestion and other emerging technologies must also be considered. The potential to use slurry or manure to recover and generate power for local communities should be incentivised and encouraged. While the methane from such manures can generate a source of energy, the nutrient value of the by-product is still available for land spreading. Many rural areas of Ireland have heavy soils that are not capable of taking up nutrients effectively or quickly enough. To ensure that these nutrients are not lost, an incentivised scheme to transport slurry or manure off-farm including to land more suitable to intensive farming should be considered. This is already the practice in areas of intensive poultry production.

We understand that advances in the scientific understanding of soils and communications provide a valuable resource for farmers (e.g. soil sampling and the use of soil P susceptibility maps etc.). The extensive gathering of further useful information at field scale level will support best practice. The use of Nutrient Management Plans should be encouraged on all farms, not just derogation farms.

3. **How should agricultural impact on soil be minimised on derogation farms?**

   Measures to promote eco till, cash crops and other approaches to reduce carbon loss to the wider environment from bare soil and traditional tiling methods should be considered.

   Similarly, measures to reduce soil compaction (which can result in preferential surface water flows) and improving soil structure should be promoted.

   There is evidence that the application of lime to certain soil types would improve nutrient uptake in plants following landspreading. Liming of lands, where necessary, should be mandatory.

4. **What specific actions can derogation farms take to minimise their impact on the environment?**

   As part of the development of source protection plans, Critical Source Areas (CSA) within a drinking water catchment are being identified (if any). Farmers, derogation or otherwise, within these areas are working with communities to implement specific measures and actions (depending on the pressure) to improve and/or protect the drinking water supply. Many of these actions may go beyond the current regulations in place. In such instances these should be supported.

   Soil sampling on a field scale should be promoted and encouraged to ensure that farmers have the knowledge to make the right decisions in relation nutrient management.

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

   Non-derogation farmers farming within CSAs of drinking water catchments should be advised and supported to implement measures that currently apply only to derogation farmers. There should be no distinction between the two categories.

   It may be necessary for Agri-environmental programmes aimed at environmental protection to be enhanced to encourage livestock farmers on poorly draining soils (and on freely draining soils where water quality issues have been identified) to farm sustainably.

We hope the comments and suggestions contained in this submission will be positively considers as part of this review process. Should you require any clarification or further information, please contact me.

Barry Deane
CEO NFGWS