An Taisce
The National Trust for Ireland

EVALUATION OF RPS ENVIRONMENTAL REPORT ON STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA) OF 4TH. DRAFT NITRATES ACTION PROGRAMME 2018-2021 NOVEMBER 2017

1. WHY A LEGALLY COMPLIANT SEA WITH ONGOING MONITORING AND APPROPRIATE REMEDIAL ACTION IS REQUIRED

The compliance of the Draft 4TH. Nitrates Action Programme SEA Environmental Report with the legal requirements of the SEA Directive 2001/42/EC needs to be assessed and validated.

The SEA Environmental Report needs to asses and mitigate the impact on all of the considerations listed in the SEA Directive namely: *"Biodiversity, flora and fauna population human health, soil, water landscape air climatic factors, material assets and cultural architectural and archaeological heritage"* as well as *"interrelationships".*

The 4TH. Nitrates Action Programme needs to comply with Annex (1) (g) of the Directive to identify:

> the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;

The adoption of plan is only part of the SEA process which then requires under Article 10 ongoing implementation action to:

"*monitor the significant environmental effects of the implementation*" of the plan *"in order, inter alia, to identify at an early stage unforeseen adverse effects, and to be able to undertake appropriate remedial action"*

Failure to carry out an effective SEA and put adequate monitoring and remedial action in place would expose Ireland to legal action at national and EU level.

The proposed programme also needs to address the interrelationship of bovine agricultural expansion with nitrous oxide as well as methane emissions, as well as climate vulnerability and fodder supply, having regard to the provisions of Section 15 of the Climate Action and Low Carbon Development Act 2015

2. PRE DRAFT CONSULTATION AND RESULTING REPORT AND RECOMMENDATIONS

Given that the 3rd. Nitrates action programme expires on 31st Dec. 2017, the belated initiation of SEA consultation has not been explained.

At the same time the impact of Food Harvest 2020 and Food Wise 2025 combined with the lifting of milk quotas is underpinning increased bovine stocking and nitrate pressure.

A Consultation paper was published by the Department of Housing Planning and Local Government on 2 March 2017 inviting submissions by 3 May 2017. 28 Submissions were received.

The submissions were reviewed by an Expert Group specifically set up to carry out the task.

The resulting " *Report and recommendations to Department of Housing Planning and Local Government and the Department of Agriculture Food and the Marine in relation to submission received and suggested measures to be included in Irelands 4th nitrates Action Programme*" were published in September 2017 .

The recommendation of this Expert Group informed the Draft Programme and were endorsed as the preferred alternative as stated in Section 7 of the SEA Environmental Report.

3 EVALUATION OF THE SEA ENVIRONMENTAL REPORT COMPLIANCE WITH SEA DIRECTIVE ARTICLE 5(1) AND ANNEX 1

Table 3.3 of the SEA Environmental Report: *"Requirements of the SEA Directive and Relevant Section in Environmental Report*" collates the 10 subsections (a) to (i) of Annex 1 of the Directive, with relevant chapter headings 2 to 9 in the Report.

This submission considers the contents of the SEA Environmental Report in this sequence to determine in particular how the SEA will ensure meeting the core provision of the Directive for mitigation of *"any significant adverse effects on the environment* " proper monitoring of the "*significant effects* " and *"to be able to undertake appropriate remedial action"*

1. Annex 1(a)

> Annex 1 (a) an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes;

Relevant Sections of SEA Environmental Report: Chapter 2: *Content and Main objective of the Plan* and Chapter 4 *Review of Relevant Plan Policies and Programmes*

Chapter 2 outlines the EU legislative background, the Good Agricultural Practices (GAP) Regulations, and supporting commitments summarised in Section 2.1 "*Introduction"*.

"This chapter provides an overview of the draft NAP and its policy objectives which have been subject to the SEA and AA process as document in this Environmental Report"

Section 2.3 "Nitrates Action Programme" states that:

"Since the last review of the NAP there have been changes both directly and indirectly to Irish farming and such factors must now be considered in the draft NAP. This includes the publication of the policy document, Food Wise 2025 in 2015 which similar to the previous policy publication Food Harvest 2020, promotes a focused increase in agri production, particularly in the dairy sector and the removal of milk quotas. Much of the focus of the Food Wise is on the dairy sector which has been a success story in Irish agriculture. This sector, and the future promotion of the products form this sector on the world stage, is very much dependent on a global green image that Ireland has enjoyed over the last number of decades increase in agri production"

And further states

"The removal of milk quotas has resulted in large increases in the national bovine herd over recent years. Additionally there have been increases in the number of derogation farmers"

Food Harvest 2020 Food Wise 2025 have no basis in legislation, and have no legal status or statutory basis as a plan or programme.

The coalition of Irish development NGOs forming "*Stop Climate Chaos*" and The Environmental Pillar which both include An Taisce have published a report "*Not So Green: Debunking the Myths around Irish Agriculture*" in 2016:

http://www.antaisce.org/articles/not-so-green-revealing-the-truth-behind-irelandsgreen-Image

This challenges Government and industry claims on the sustainability of EU Common Agricultural Policy supported Irish agriculture concluding that "*Overall, Irish agriculture in its current form is damaging to climate, water quality and biodiversity*" and is not contributing to global food security.

It concludes that "*Agricultural intensification has caused significant negative impacts to Irish biodiversity*"

It cites the impact of agricultural intensification or inappropriate afforestation causing the "*bad*" conservation status of a wide range of internationally important Irish habitats, the decline of ten key farmland birds and that "*One third of Irish wild bees are under threat of extinction".* The treatment of badgers needs to be addressed with the conclusion of a Northern Ireland pilot on TB vaccination assessed as an alternative to culling.

Irish Agriculture is now using the marketing label of "*Origin Green*" which is not based on any independent internationally referenced standard, and being promoted as "*Climate Smart*" merely because the carbon impact is being counted, but not mitigated. The Origin Green label is open to international exposure as "*Greenwashing*". Products given the Origin Green label include mushrooms produced with peat compost, sourced from bogs where there has been no Environmental Impact Assessment for industrial extraction.

Chapter 4 is titled "*Review of Relevant Plans Polices and Programmes*"

Section 4.1 states the purpose of this chapter is *"to set out how the draft NAP interacts with other key relevant plans and programmes and their environmental protection objectives*"

Section 4.3 is headed *"Relationship of the Draft NAP and other Plans/ Programmes /Policy*" and follows SEA headings.

Section 4.3.1 under Agriculture refers to the impact of Food Wise 2025 in having "*the potential to apply increased pressure on the environment in localised areas through the intensification of farming. A formal SEA and AA was carried out on Food Wise 2025 "*

Food Harvest 2020 was approved without Strategic Environmental Assessment (SEA). Food Wise 2025, although not a statutorily based plan or programme, was subject to SEA, so that if monitoring of agricultural intensification shows adverse impacts, which is now clearly occurring, corrective action is required.

The contradiction at EU as well as national policy and legal level must be resolved. The EU is promoting Climate action and seeking to enforce legal Directives on water quality and biodiversity, while at the same time through CAP subsidising unsustainable bovine agricultural intensification undermining climate action, water quality and conflicting with biodiveristy.

Conclusion:

1. The legal status of "Food Wise 2025" is not identified or addressed.

2. No information on monitoring and mitigation of adverse effects of Food Wise 2025 is provided

3 Under "*relationship with other relevant plans and programmes*" no consideration is provided as to how potential contradictions with main objectives of NAP on WFD water quality targets with Food Wise 2025, are to be resolved

2. Annex 1(b) State of the Environment (Baseline)

Annex 1(b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;

Relevant Sections of SEA Environmental Report: Chapter 5 *"Relevant Aspect of the State of the Environment (Baseline).*

5.1.1 Summarises the EPA identification of 4 key challenges and 7 key actions for Ireland. Table 5.2 is "*Summary of Current State of the Environment 2016*" and undated summary for Northern Ireland.

The baseline data is seriously deficient. It does not address the progressive increase in Nitrates Derogation which occurred from the first second and third NAPs from 4,500 for the first to 5,100 for the second to 7,000 for the current.

In August 2017 the Environmental Protection Agency (EPA) published the 6 year reporting account to the EU of River Basin Management under the EU Water Framework Directive (WFD). It revealed that no effective progress has been made in meeting targets to improves the quality of Irish rivers, lakes and estuaries

https://www.epa.ie/newsandevents/news/name,62863,en.html

The overall 13 % improvement proposed for the 2010 -2015 period has failed, with little change in water bodies in an unhealthy state: at 43% from 45% for Irish rivers, the 54% figure for lakes unchanged, and estuaries marginally unchanged to 69% from 70%. The report also reveals continued loss of the most high status waters.

The current annual cattle herd increases of 6% per annum is creating renewed water quality pressures in meeting the Nitrates Directive, and the overlapping impact of slurry and fertilizer run off affecting water quality. The most recent data presented by the Dept. of Agriculture at the EPA National Water Forum in June 2017 revealed that 12% of farms with a derogation are failing to comply and of the remaining 130,000 the failure rate is 30%.

See : Report Farming Independent 29 June 2017. APPENDIX 1

https://www.independent.ie/business/farming/forestry-enviro/theres-a-fear-attached-when-the-department-of-agriculture-comes-thats-not-the-way-it-should-be-35867062.html

The integration of CAP farm support and Rural Development funding with Biodiversity is an overriding requirement. In 2015 An Taisce challenged the Department of Agriculture, Food and the Marine to explain why €400 million of funds allocated under the Common Agricultural Policy were diverted away from supporting marginal farmers and wildlife.

Successive EU funded REPS, AOS and GLAS schemes have not resulted in meaningful impact on Irish biodiversity protection and enhancement.

Conclusion.

Chapter 5 is deficient in reconciling the accommodation of increase bovine agricultural impact with climate targets under the National Mitigation Plan under the Climate Action and Low carbon Development Act 2015, and groundwater protection and River Basin Management under the Water Framework Directive.

3. Annex 1(c) Environmental Characteristics

> Annex 1(c) the environmental characteristics of areas likely to be significantly affected;

Relevant Sections of SEA Environmental Report Chapter 5 *"Relevant Aspect of the State of the Environment (Baseline).*

Identification of environmental characteristics is an essential foundation of the SEA process. Adequate identification of environmental characteristics is required as the foundation for the ongoing monitoring of the plan, and to inform remedial action.

Soil and drainage conditions vary significantly and Teagasc and the EPA have access to detailed soil mapping allowing nitrate vulnerable areas to be identified.

Section 5.2.3.1 on soils does not give any consideration or explanation as to why Ireland has not followed the practice of other European countries in designating nitrate sensitive zones.

Section 5.2.3.3 covers "Geology and Hydrogeology"

The considerations set out do not reflect up to date international research on nitrate impact on hydro geology. In a paper published in November 2017 in Nature Communications, scientists from British Geological Survey and Lancaster University estimate that up to 180 million tonnes of nitrate are stored in rocks worldwide - perhaps twice the amount stored in soils.

They say this is the first global estimate of the amount of nitrate trapped between the soil layer and the water-bearing aquifers below. They warn that over time the nitrate will inevitably slowly seep into the aquifers.

See :"**Global patterns of nitrate storage in the vadose zone"** M J Ascott a*nd others : Nature Communications* **8**, Article number: 1416 (2017)

https://www.nature.com/articles/s41467-017-01321-w

A media report, of 10 Nov 2017 provides a non-technical summary APPENDIX 2

http://www.bbc.com/news/science-environment-41945650

Conclusions.

Mapping data for nitrate vulnerable soils and hydro geology would allow nitrate vulnerable areas to be identified

4. Annex 1 (d) Existing Environmental Problems

> Annex 1(d) any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC;

Relevant section of SEA Environmental Report Chapter 5 "*Relevant Aspect of the State of the Environment (Baseline*).

The state of Irish Biodiversity and the extent of habitats and species with *"Bad*" or "*Unfavourable*" status is identified in Table 5.2.

Section 5.2.1.6 states that

"*The main drivers and pressures on biodiversity flora and fauna noted by the EPA in their most recent State of the Environment report (2016) which are relevant to the Draft NAP include land use changes and intensification of agriculture*"

And

"Aquatic habitats in particular are noted for being at poor conservation status compared to terrestrial habitats"

Section 5.2.3.4 in considering existing environmental pressures on soils, geology and hydro geology states that:

"The 2016 State of the Environment report indicates that the main drivers of land use change will be the agricultural policy of Food Weise 2025. " And further identifies "*nitrate vulnerability*" among 10" *key issues*".

Unlike other EU countries no nitrate vulnerable zone shave been designated.

Section 5.2.4 identifies agriculture as the lead pressure on water quality.

Section 5.2.4.2 on Rivers states "a *number of monitoring sites have indicated increasing upwards trends in nitrogen leading to upwards trends in nitrogen in a number of estuaries*"

The capacity of the NPWS to engage with the agricultural sector on bio diversity protection is not sufficiently resourced.

The first objective stated in the 2017 NPWS Draft National Biodiversity Action Plan (NBAP) is to:

"*Mainstream biodiversity into decision making across all sectors*".

This is not happening. The NPWS operating budget is less than a tenth of Teagasc. The lack of resources and legal support given to the NPWS is reflected in a poor ambition in its current Draft National Biodiversity Action Plan, with the downgrading of policies and objectives

The detailed An Taisce submission on Draft NBAP is on website: www.antaisce.org

Instead of enhanced biodiversity protection, and overdue upgrading of Proposed NHAs to full NHA designation, with additional protection and resources, current Government is promoting the misnamed Heritage Bill seeking to amend section 40 of the Wildlife Act to extend the hedge cutting and burning seasons. Furthermore the proposal under Section 1.1.4 of the Draft NBAP to "*strengthen ecological expertise in Government Departments, agencies and local authorities*", is not underpinned by any meaningful action. An objective in the July 2016 draft for "*Biodiversity Training Material for Government Officials*" was dropped as a mid-term target.

Conclusions

The resources given to the NPWS for integrating the management of agriculture with achieving Natura 2000 obligations are not in place.

5. Annex 1 (e) International Community or Member State level of Environmental Objectives

Annex1(e) the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation;

Relevant section of SEA Environmental Report: Appendix B

Appendix B sets out a comprehensive overview and summary of Ireland relevant International EU and National Commitments.

However while a plan or commitment may be adopted this does not resolve compliance

Conclusion

The Environmental report has not addressed the level or Irelands failure in Climate Action. Ireland has not adopted a National Mitigation Plan (NMP) for Climate Action to achieve the level of action require under the Paris Agreement, or the lower targets to 2020 required under the current EU Effort Sharing Decision. The same apples to Ireland's compliance with the UN Biodiversity Convention and the natural 2000 targets for habits and species under EU law

6. Annex 1(f) Likely Significant Effects on the Environment

Annex 1(f) the likely significant effects(1) on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors;

Relevant section of SEA Environmental Report: Chapter 8 *"Assessment of preferred scenario"*

Conclusion

There is a systemic failure to assess the likely significant impacts of continued bovine agricultural expansion under Food Wise 2025.

7.Annex 1(g) Mitigation

Annex 1(g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;

Relevant section of SEA Environmental Report: Chapter 8 *"Assessment of preferred scenario"*

Six measures outlined in the Draft NAP under the heading Part 2 to part 7:

Part 2 Farmyard Management

2 SEA Recommendation and Mitigation measures are proposed:

1. ***Article 8(2) on storage facilities being able to cope with adverse weather conditions***.

The proposed mitigation measure to address climate change provides that *" as winters are predicted to become wetter, with increases of up to 14 per cent precipitation under the high emission scenarios by mid-century, it is recommend that freeboard requirements in Table 1 to 3 of the Draft NAP are increased in all future developments of uncovered storage facilities to provide greater resilience to climate change "*.

The proposed measure is inadequate as to what level of increase in Tables 11 to 3 of the Draft NAP is required.

2 Article 14 on situations including out wintering where reduced storage may be acceptable.

Proposed Mitigation measure on moving in field supplementary feeding points not sufficient to demonstrate mitigation of poaching.

Part 3 Nutrient Management

5 SEA Recommendations and Mitigation measures are proposed:

Of particular concern are:

1.N and P indices

For N and P indices all that is recommended is "*further consideration of the environmental suitability of Morgan's extractible P is undertaken*"

"*Further consideration*" is not a meaningful mitigation measure

3.Stocking rates.

This refers to Article 16(2) stating *" that determination of grassland stocking rates are to be based on previous years stocking rates*" A mid-season determination of fertilizer requires is recommended to allow for increase or decrease in stocking. However this does not address the capacity by which stock may be increased.

Part 4 Prevention of Water Pollution from Fertilizers and Certain Activities

8 SEA Recommendations and Mitigation measures are proposed in relation to Article 17:

On 3 it is recommended that *"greater buffer zones are considered where the slope, soil type and or receiving waters sensitivities are such that there is a potential risk of pollution"*

"*Considered*" is not a meaningful mitigation measure.

On 8 on "*the impact of bovine livestock accessing water courses*" refers to the Teagasc COSAINT project. . However action is left to be resolved after the *"results from this project are considered to revaluate measure 17(18) in the next review*

3 SEA Recommendations and Mitigation measure are proposed in relation to Article 18:

On 2 the mitigation of factors exacerbating surface flow are left to *"discussions with the EPA Catchment Management Unit and Teagasc"*

"*Discussions with the EPA*" is not a meaningful mitigation measure

Part 5 General

The only mitigation measure proposed is a vague reference for *"greater implementation of "Knowledge Exchange "platforms are initiated during this Programme period to provide advices and guidance to promote behavioural change and voluntary action".*

This is vague and uncertain in impact and implementation. The EPA consultation input had advised: *"Recommend making a clear distinction between programme recommendations such as knowledge transfer, resources etc, and more defined SEA mitigation measures to be established, implemented and monitored to protect the environment"*

Part 6 Functions of Public Authorities

The only mitigation measure proposed is that "*It is recommended that resources are made available to local authorities either directly or indirectly to undertake inspections as per the requirements of Article 30(2) of the programme*".

There is no provision for any new resources being put in place.

Part 7 Derogation

The 2014 and two previous NAPs provided for derogations which increased in 2014, the previous.

Section 8.3.6 of the SEA Environmental Report states that: *"Ireland was granted* a *derogation under SI 134 of 2014 to allow intensive farmers a higher stocking rate of livestock manure, subject to them complying with strict rules that are overseen by the department of Agriculture Food and the marine.*

The derogation increases the application limit of 170kgN ha¬1of livestock manure to 250kgN ha¬1 each year. In Irealnd the derogation is of critical importance to the dairy industry and Food Wise 20205 expansion plans. The current derogation will run to the end of 2017, when the thirs NAP concludes"

It is stated that: *" the Commission's decision on derogation for Ireland does not form part of the 4th NAP as it has to be sought by Ireland and adjudicated by the Commission, for each new cycle of the Draft NAP. However, and so far, the derogation has been adapted from cycle to*

cycle seamlessly. Therefore while the Regulation governing the derogation is not included in this Programme, it has been assumed for the purpose of this SEA that it will continue and has consequently been assessed in the following sections "

No scenario has been provided as to what measures are proposed if the derogation is not granted.

No information is provided as to what derogation is being sought, and whether as with the 3rd. programme a larger number of qualifying farms are being sought in comparison to the previous.

Conclusion

The compatibility of the mitigation measures with the continued expansion of bovine agriculture under Food Wise 2025 has not been demonstrated.

8.Annex 1 (h) Alternatives

> Annex 1 (h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;

Relevant Section of SEA Environmental Report: Chapter 7 *Alternatives*

Three alternatives are considered in Chapter 7 namely:

Business as usual scenario

Application of only basic element s of the Expert Group Recommendation

Full application of the Expert Group Recommendations

The preferred option is Option 3. It is stated that this option was *"designed with a view to improving the existing measures to continue to reduce the pressure from agriculture on water quality and allow for the sustainable development of agriculture under Food Wise 2025"*

A recommendation in the EPA pre SEA consultation advised "*worth considering alternatives that reflect national aims of sustainable food production/ environmental protection*" was ignored

Conclusion.

The three alternative assessed are all based on continuing bovine expansion. No consideration has been given to alternative options and scenarios reducing the scale of bovine agriculture and promoting better food security and lower environmental impact with plant based nutrient crops.

9.Annex 1(i) Monitoring

Annex 1(i) a description of the measures envisaged concerning monitoring in accordance with Article 10;

Relevant Section of SEA Environmental Report: Chapter 9 *"Mitigation and Monitoring"*

Monitoring along with mitigation, is the key provision of the SEA Directive.

The proposed monitoring of the NAP is contained Chapter 9 "*Mitigation and Monitoring* " Table 9-3 "*Environmental Monitoring Programme"* under 4 headings: "*Strategic Objective, Target, Indicator and Data source."*

Objective 1 Biodiversity Flora and fauna

No target is provided to address the habitat and species rated as having unfavorable or bad status, and where agricultural is a causal impact in Article 17 Habitats Directive reporting

Objective 2 Population and Human Health

Only measures outlines are water quality standards required under EU law but without targets including for "reduction in drinking water restriction notices"

An indicator of "improved water quality status "is not adequate mitigation measure. A clearly stated target is required.

Objective 3 Soils

Only specific target to limit built surface cover nationally to below the EU average of 4%. No provision on soil protection including carbon storage of peat soils.

No mitigation measure to stabilize carbon in the 20% of national area in peat soils, containing 75% of organic soil carbon.

Objective 4 Water

River Basin Management Plan targets are not defined

Objective 5 Air Quality

Left to be resolved in future National Clean Air Strategy. Ammonia emissions not addressed.

Objective 6 Climatic factors

No target is set to "reduce agriculture's contribution to Ireland GHG emissions"

The proposed programme does not address the interrelationship of bovine agricultural expansion with nitrous oxide as well as methane emissions, having regard to the provisions of Section 15 of the Climate Action and Low Carbon Development Act 2015.

The impact of climatic factors on grass growth and animal feed supply is not addressed

Objective 7 Material Assets

The target is to prevent any deterioration in the status of surface water and ground water in the RBD with ref to the EPA.

Objective 8 Archaeology Architectural and Cultural Heritage

States "*More appropriately dealt with at project (EIA) level*"

The continued and increased impact of bovine agriculture occurring on a farm by farm basis with Food Wise 2025 targets, and is not subject to EIA, so the strategic assessment of impact on Archaeology Architectural and Cultural Heritage is not occurring.

Objective 9 Landscape

States "*More appropriately dealt with at project (EIA) level.*

The continued and increased impact of bovine agriculture occurring on a farm by farm basis with Food Wise 2025 targets, and is not subject to EIA, so the strategic assessment of impact on landscape such as increased animal housing is not occurring.

Section 5.2.8.3. States that "*existing pressures on landscape and visual resources as a result of agricultural activities are limited and are generally related to secondary impacts to sensitive views and landscapes resulting from intensive activity without sensitive regard to these resources".*

This claim is not justified as the impact affects all rural landscapes.

Conclusion:

The targets are in general weak and undefined and are not integrated with EU obligations on water quality and biodiversity and Paris Agreement obligations on climate mitigation, or immediate EU Effort Sharing decision targets to 2020.

10.Non-Technical Summary

Annex1 (j) a non-technical summary of the information provided under the above headings.

(1) These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

Conclusion

The Non-Technical Summary reflects the overall content of the SEA Environmental Report in providing inadequate timetabled and targeted mitigation measures, and failing to provide for the monitoring and remedial action required to address adverse impacts.

11. Interrelationships

Annex 1(f) the likely significant effects(1) on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors;

Relevant Section of SEA Environmental Report: Section 5.3 "*Interrelationship between SEA topics*"

Annex 1(f) provides for consideration of interrelationships between factors.

Section 5.3 of the Environmental Report covers "*Interrelationship between SEA topics*" and set out in Table 5-11. The provision of a box table of *"Interrelationship of SEA topics"* does not meet the requirement of the Directive.

The SEA entirely fails to asses major interrelationships eg. Between climate and soil and water.

The draft programme fails to assess the interrelationship of bovine agricultural expansion under Food Wise 2025 increase climate impact, including nitrous oxide as well as methane emissions, having regard to the provisions of Section 15 of the Climate Action and Low Carbon Development Act 2015.

The draft programme fails to assess climate vulnerability. In 2013 there was a major fodder crisis which cost 500 million. Future climate impact with more variable rainfall and weather patterns increases risk to fodder supply.

The EPA consultation advice has specifically raised:

"Climate change induced weather events /storminess and the effect on runoff:

Soil integrity may be impacted by climate change"

These interrelationships were not addressed.

GENERAL CONCLUSIONS

Section 9.1 of the Environment Report on *"Mitigation and Monitoring"* acknowledges the requirement of Article 10 of the Directive:

"that monitoring be carried out in order to identify and an early stage unforeseen adverse effects due to the implementation of the draft NPF, with the view to taking remedial action where adverse effects are identified through monitoring"

However no mechanism is set out as to how this monitoring is to be carried out, and definitions and what is the trigger for taking remedial action if adverse effects are not identified.

The SEA Environment Report is systemically deficient in meeting the obligations of the Directive, for the reasons outlined in this submission

The draft NAP additionally fails to address the interrelationship of bovine agricultural expansion under Food Wise 2025 with nitrous oxide as well as methane emissions, having regard to the provisions of Section 15 of the Climate Action and Low Carbon Development Act 2015.

The tabling of an entirely revised SEA Process and Environmental Report is required with clearly identified timetabled and targeted mitigation measures, effective monitoring in all areas and the legal implementation regime to take remedial action where adverse effects are identified through monitoring. This will need to include reducing bovine stocking rates when appropriate mitigation cannot be achieve by other means.

APPENDIX 1

Report Farming Independent 29 June 2017

'There's a fear attached when the Department of Agriculture comes. That's not the way it should be'

Farmers could pay a heavy price for the water quality and other environmental issues surfacing as food production increases, reports Paul Melia

Thousands of farmers are failing to comply with EU nitrates directives. This, and increased food production, is putting further pressure on already stressed water resources, the EPA has warned.

Farming is at a crossroads. Ramping-up food production to meet targets under the Government's Food Wise 2025 plan means there's pressure to increase output and intensify, but at the same time farmers are expected to comply with increasingly-stringent environmental regulations.

Many are failing.

Figures from the Department of Agriculture show that thousands are failing to comply with rules under the Nitrates Directive, which limits the amount of nitrogen allowed on land.

Of 7,000 farms with derogations under the directive, allowing them a higher application limit, some 12pc failed to comply.

Of the remaining 130,000 without a derogation, the failure rate stands at 30pc.

That has a financial cost, senior inspector with the Department of Agriculture Jack Nolan told the Environmental Protection Agency's (EPA) National Water Forum in Galway. Some €2m in fines were levied last year.

In addition, creameries are now threatening to cut the price of a litre of milk by 5c/l unless farmers can prove they're operating to the Bord Bia Sustainable Dairy Assurance Scheme standards.

"Compliance levels haven't improved. We are inspecting and penalizing, we're taking money back from farmers but it's not proving effective. We have a strong inspection regime but it's not working," Mr Nolan said. "In 2007, we had 4,500 farmers with a derogation, this year we have 7,000. It's likely these numbers will increase.

"Farmers are intensifying. It was 60 cows per herd, it's now 100. The average age of farmers is 58 years, but for dairying it's lower. We're finding young farmers are a problem, too, because they're under such pressure to expand. Farmers are not buying into it. They do it out of fear of inspection. They don't see the value."

He points to the requirement for farmers to calculate how much nitrogen and phosphorous can be safely spread on the land, which adds an "extra layer" of difficulty.

Just over 20pc of all land surveyed is believed to be in optimal condition. Mr Nolan suggests that most land doesn't have the right level of phosphorous, nitrogen and lime.

"Part of that is fear of regulation, costs, and in part due to a lack of education. It will lead to problems down the road. You can't keep increasing output if you're running down the soil.

"Farmers are delighted when I leave the yard (after inspections). The reason is they don't trust us. There's a fear attached when the Department of Agriculture comes. That's not the way it should be."

Some 400,000 jobs are in water-intensive industries including food production and agriculture, meaning the links between farming and clean waters are critically important.

Major challenges exist.

The EPA says that in 1996, 4pc of our waters, including rivers and lakes, were classified as 'pristine'.

That has now dropped to 0.7pc. On the other hand, 20 years ago some 77km of river channel were classed as 'seriously polluted', which has fallen to 6km. But there are now an additional one million cattle on the land, which is increasing pressures.

The numbers will grow -since the removal of milk quotas in 2015, the number of dairy cows has increased by 300,000. It is projected to rise by 6pc this year, and 6pc in 2018.

That puts further pressure on already stressed water bodies, with the EPA saying that of 4,000 river and lake water bodies, 1,360 - or 34pc - are at risk, often from multiple sources.

Senior catchment scientist at the EPA Jenny Deakin points out that half of all at-risk water bodies face multiple-pressures - agriculture, urban wastewater treatment plants, forestry and extractive industries including mining and peat production. "The greatest number of water bodies are impacted by agriculture, but there's no surprise there because agriculture is by far the biggest land use," she said.

"It's particularly challenging due to the number of water bodies, the diverse number of landholders involved, the lack of resources on the farm to take actions and the multiple agencies and players. A one-size-fits-all solution won't work."

Many suggest now is the time for debate and to put in place measures to help farmers become greener and reduce the impact of their activities on water courses and the wider environment.

Debate

Chair of the National Water Forum Tom Collins says things have changed a lot in the last two decades.

"We do need a debate," he told the conference. "I think farming is at a tipping point around the environment. It has learned that clean water is an essential ingredient, and that is a shared preoccupation with the farming community.

"Farming is at a perfect tipping point where it is realising that it is very much in its interest to get behind this project. That is an enormous development from where we were 20 years ago."

Work is happening on the ground. Under the National Dairy Sustainability Initiative, 180 farms will be chosen by early autumn as test sites for a range of environmental works. The Local Authority Water and Communities Office (LAWCO) is working with farmers, angling groups, local development companies and others to highlight concerns and set out possible solutions.

Thomas Ryan, executive with the IFA's environment and rural affairs committee, asks that people "walk in our shoes" and look at environmental work on the ground.

"There's so much happening, and more can be achieved because we can't afford to get it wrong. The journey we're on is a journey of collaboration."

Dr Donal Daly from the EPA agrees, saying the future is collaboration and not diktats.

"Farmers don't like being told what to do and we have to take that into account. Farmers are custodians of the rural environment, and we have to see how we can assist them.

"Most farmers' contacts with the environment are in the form of inspections, and many fear inspections. We need to move away from that."

APPENDIX 2

Scale of 'nitrate timebomb' revealed

By Roger Harrabin BBC environment 10 November 2017

- **From the section Science & Environment**

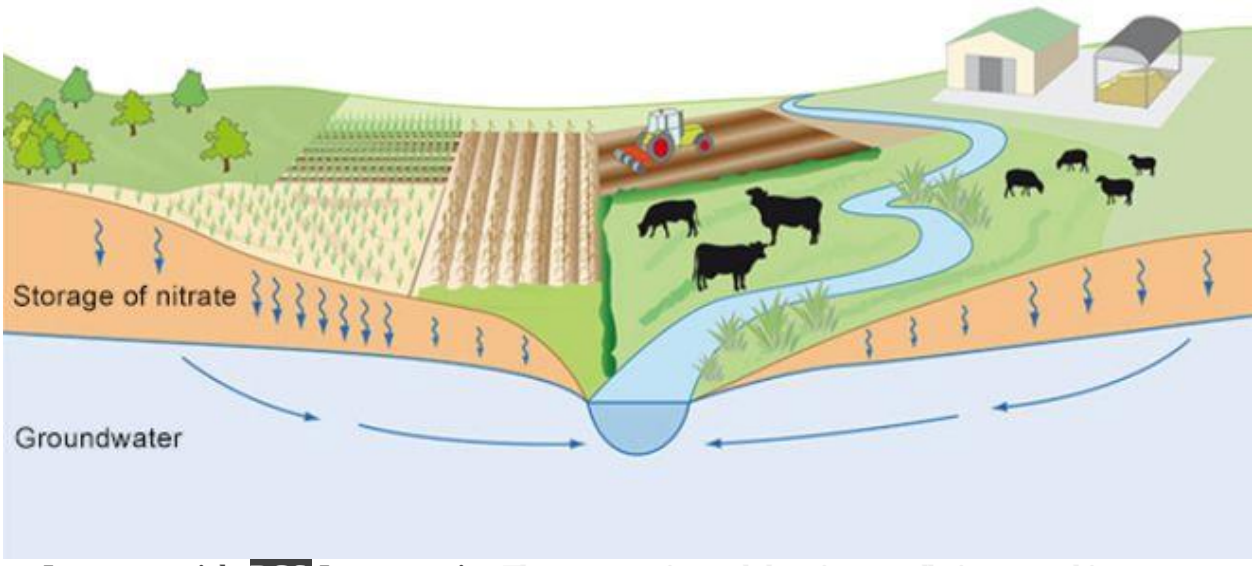


Image copyright BGS Image caption The team estimated the nitrate pollution stored in rocks above groundwat

Huge quantities of nitrate chemicals from farm fertilisers are polluting the rocks beneath our feet, a study says.

Researchers at the British Geological Survey say it could have severe global-scale consequences for rivers, water supplies, human health and the economy.

They say the nitrate will be released from the rocks into rivers via springs.

That will cause toxic algal blooms and fish deaths, and will cost industry and consumers billions of pounds a year in extra water treatment.

In a paper in Nature Communications, the scientists from BGS and Lancaster University estimate that up to 180 million tonnes of nitrate are stored in rocks worldwide - perhaps twice the amount stored in soils.

They say this is the first global estimate of the amount of nitrate trapped between the soil layer and the water-bearing aquifers below. They warn that over time the nitrate will inevitably slowly seep into the aquifers.



Image copyright Getty Images

Most nitrate, the team says, is in rocks in North America, China and Europe where fertiliser has been lavishly applied for decades.

In some developed countries, the amount of nitrate stored in the rocks is increasing, despite improvements in farming practice and the introduction of rules to control the pollutant.

In developing countries, the problem is currently not so severe. But there is an urgent need for early intervention to avoid the environmental damage experienced by rich countries.

Matthew Ascott, hydrogeologist at the BGS and lead author, said: "With big investments being made to reduce water pollution through changes in farming, it is vital that we understand what pollution is already in the environment.

"Water and the pollutant travels through the rocks below our feet very slowly. This and a history of intensive agriculture means that a large store of nitrate pollution has built up over time.

"When this pollution is released, it will continue to impact water quality for decades, in some cases, even where controls on fertiliser use have been put in place."

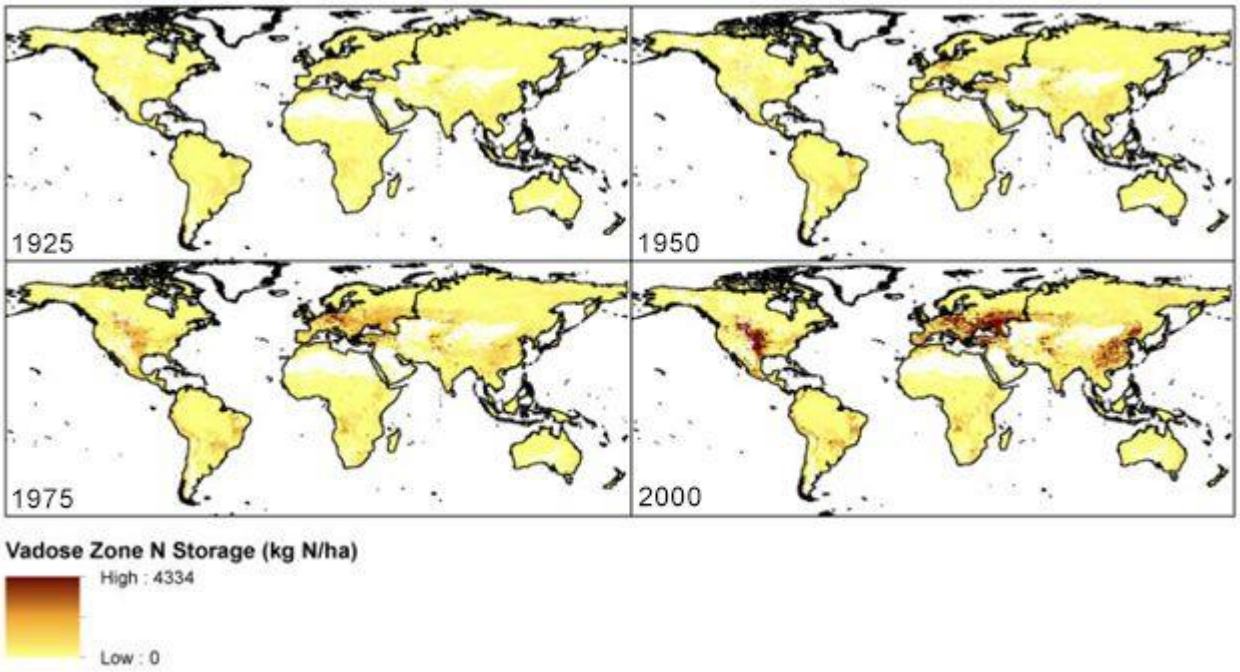


Image copyright BGS/Ascott et al The unsaturated region below soils but above groundwater is called the vadose zone

This is what's known as the nitrate timebomb.

The EU is trying to clamp down on careless application of nitrates but farmers say the fertilisers are vital for agricultural productivity.

The UK government has said all EU environmental laws will be brought into British law after Brexit. But a legal taskforce set up by the UK Environmental Law Association (UKELA) to examine the risks of Brexit identified nitrate pollution as an example of the protections that will be at risk when European laws are rolled over into domestic legislation in 2019.