An Taisce
The National Trust for Ireland

CAP Rural Development Division
Department of Agriculture, Food and the Marine
Agriculture House
Kildare Street
Dublin 2

Sent by email to: CAPStrategicPlan@agriculture.gov.ie

13th April 2021

Re. Public Consultation on draft Scoping Report for the Environmental Assessment of Ireland's CAP Strategic Plan 2023-2027

To Whom It May Concern,

An Taisce welcomes the opportunity to comment on the draft Scoping Report for the Strategic Environmental Assessment of Ireland's CAP Strategic Plan 2023-2027. Our submission consists of two parts:

1. Legal considerations: We attach a legal infringement complaint on breaches of the SEA Directive that is being sent separately to Minister Charlie McConalogue;
2. An outline of the issues that should be considered in the subject Environmental Report.

Please acknowledge our submission and advise us of any further consultation periods.

Yours sincerely,

Ian Lumley
Head of Advocacy
An Taisce – The National Trust for Ireland

PART 1: Legal Considerations
Legal complaint to the Minister under Article 10 of the Strategic Environmental Assessment (SEA) Directive 2001/42/EC

Charlie McConalogue TD
Minister for Agriculture, Food and Marine
Agriculture House
Kildare Street
Dublin 2

13 April 2021

Legal Infringement Complaint under Article 10 of the Strategic Environmental Assessment (SEA) Directive 2001/42/EC

"SEA SCOPING REPORT OF DRAFT COMMON AGRICULTURAL COMMON AGRICULTURE POLICY STRATEGIC PLAN PREPARED UNDER SI 435 OF 2004 AND SI 200 OF 2011 For THE DEPARTMENT OF AGRICULTURE FOOD AND MARINE,"

BY MINOGUE ENVIRONMENTAL CONSULTING LIMITED, A CONTRACTOR WITH RSK IRELAND LIMITED, PUBLISHED FOR PUBLIC CONSULTATION BY DAFM

Dear Minister,

We submit for your response an infringement complainant under the SEA Directive on the process being initiated by DAFM or the SEA for the Draft CAP Strategic Plan 2023-2027, and the advice being provided by the Department's consultants.

OVERVIEW

This complaint arises from the content of the *Scoping Report* prepared for the Department by Minogue Environmental Consulting Limited, a contractor with RSK Ireland Limited, and advertised for consultation for 13 April 2021.

There is firstly an overarching consideration that the National 2004 and 2011 SEA Regulations do not properly transpose the SEA Directive into Irish law. European Court and national jurisprudence has established that where a lacuna arises in national legislation and/or regulations an EU Directive has direct effect.

The Minogue Environmental Consulting Limited Draft SEA Scoping report document references "*Plan Implementation and Monitoring*" on Page 8. However, it is devoid of any consideration of the nature of the proposed monitoring regime and the requirement under

Article 10 of the SEA Directive requiring member state *"to identify at an early stage unforeseen adverse effects, and to be able to undertake appropriate remedial action".*

As a member of the CAP Stakeholder Consultation Forum, An Taisce has repeatedly raised concern with Assistant Secretary DAFM Paul Savage that the SEA process for the CAP Plan is proceeding without any integration with the parallel process being undertaken by the DAFM-supported AgriFood 2030 Committee under Chair Tom Arnold.

This Committee is formulating the content of a new ten-year AgriFood 2030 Strategy, which would be adopted as Government policy through DAFM endorsement. This process is being advanced without regard to the ongoing the CAP Plan process which will need to be subject to EU regulation, is still at Draft stage since 2018, and where major consideration of integration with "A Farm to Fork", the European Biodiversity Strategy to 2030 and climate action remain unresolved.

An SEA scoping for AgriFood 2030 was published by DAFM in August 2020, produced by RSK consultants, on which An Taisce made a submission.

An Taisce was engaged with the AgriFood 2030 Committee through joint representation by the single Environmental Pillar representative among the 30 otherwise mainly industry lobby members. However due to lack of meaningful engagement by the Chair Tom Arnold in the multiple legal and sustainability issues arising from the Draft AgriFood 2030 strategy being advanced through the Committee, the Environmental Pillar unanimously agreed to resign from representation on the earlier this year.

It is furthermore a matter of specific issue that DAFM is initiating a new SEA process for a new ten-year AgriFood 2030 Strategy when:

1. The existing ten-year strategy FoodWise 2025 for the period 2015 to 2025 has four years left to run;
2. The implementation of FoodWise 2025 is in systemic breach obligation of Article 10 of the SEA Directive with regard to the provisions for monitoring and remedial action of significant adverse effects.

We which to advise that following complaint, the legal affairs unit of the European Commission is assessing a breach of Article 10 of the SEA Directive on the basis of large-scale failure to mitigate a range of significant adverse effects on greenhouse gas emissions, continuing exceedance of ammonia air pollution ceiling thresholds since 2016, water quality due to nitrate pollution, biodiversity and other impacts on human beings.

The following are the detailed considerations on which this complaint is based:

1. Provisions under Irish Law do not property transpose the EIA Directive in particular with regard to Article 10 for monitoring and instituting remedial action when significant adverse effects are identified

Article 10 of the SEA Directive sets out the provisions for the monitoring of a programme subject to SEA and the obligation for remedial action where unforeseen adverse effects arise:

1. *Member States shall monitor the significant environmental effects of the implementation of plans and programmes in order, inter alia, to identify at an early stage unforeseen adverse effects, and to be able to undertake appropriate remedial action.*
2. *In order to comply with paragraph 1, existing monitoring arrangements may be used if appropriate, with a view to avoiding duplication of monitoring.*

Furthermore Annex 1(f) of the SEA Directive requires the provision of baseline data in the SEA Environmental Report.

The provisions of Article 10 are not just for monitoring but, notably, for the remediation of unforeseen adverse effects. Section 8.12 of the 2001 European Commission guidance states that "*Unforeseen adverse effects is better interpreted as referring to shortcomings of the prognostic statements in the environmental report (e.g. regarding the predicted intensity of the environmental effect) or unforeseen effects resulting from change of circumstances.*"

It is submitted that a proper interpretation of Article 10 of the SEA Directive requires that the SEA monitoring process be based on quantitative and qualitative audited data to be provided and assessed on an ongoing basis during the lifetime of the plan or programme, to allow for remedial action to be taken if any unforeseen adverse effects arise

It is submitted that this is needed to ensure that, following the required baseline assessment in the SEA, ongoing monitoring or auditing as well as quantitative data is required in order to measure unanticipated change.

Producing monitoring for its own sake would not be an adequate transposition of Article 10 of the SEA Directive. It is only by auditing proper quantitative ongoing monitoring data and clearly measuring any divergence from projected effects or other effects not projected that the measurement of any "*unforeseen adverse effects*", as defined by Article 10 can be achieved.

The Strategic Environmental Assessment Directive is inadequately transposed into Irish law with two Statutory Instruments (S.I.):

1. ***S.I. 435 of 2004***[1] *(European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004, as amended by S.I. No. 200 of 2011*[2] *(European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011)*

   This is the general SEA provision and is a bare transposition of the directive. Article 17 covers monitoring but there is no legislative requirement to review monitoring or undertake remedial action.

2. ***S.I. 436 of 2004***[3] *(Planning and Development (Strategic Environmental Assessment) Regulations 2004, was amended by S.I. No. 201 of 2011*[4] *(Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011)*

   This provides for SEA for the six yearly Local Council development plans.

The 2011 amending SEA Regulations introduced parallel amendments to the Planning and Development Regulations 2001 and in relation to SEA procedures for Local Council Development Plans. The only additional requirement is that there must be a report on the monitoring included with the statutory progress report for Development Plans. Otherwise, there is no legal requirement to review monitoring and undertake remedial measures of adverse effects. It should be noted that these two-year reports are not subject to public consultation nor is there any provision in any of the transpositions for public notice of monitoring results or public submissions in relation to unforeseen significant adverse effects as required by Article 10(a) of the SEA Directive.

None of the 2011 amending regulatory provisions advanced proper transposition of the SEA Directive into Irish law.

The SEA Directive requires not just that an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment, but also requires an ongoing monitoring process capable of being audited quantitatively and the remediation of unanticipated adverse effects under Article 10, with an appropriate national oversight regime put in place to secure this.

The provisions of Article 10 of the SEA Directive have not been properly transposed into Irish domestic law. This follows a longstanding pattern of failed, delayed or inadequate transposition of EU Directives into Irish domestic law and administrative practice, including the EIA Directive, with consequence of past

[1] S.I. No. 435/2004: http://www.irishstatutebook.ie/eli/2004/si/435/made/en/print
[2] S.I. No. 200/2011: http://www.irishstatutebook.ie/eli/2011/si/200/made/en/print
[3] S.I. No. 436/2004: http://www.irishstatutebook.ie/eli/2004/si/436/made/en/print
[4] S.I. No. 201/2011: http://www.irishstatutebook.ie/eli/2011/si/201/made/en/print

and continuing legal actions and infringement complaints at national and European Court levels.

However, the provisions of a Directive have direct effect regardless of lack of transposition.

2. The oversight by Department of Agriculture Food and Marine of the SEA process for the ten-year Foodwise 2025 strategy adopted in 2015, and initiation by DAFM of a new ten-year AgriFood 2030 strategy in conjunction with a 30-member committee chaired by Tom Arnold without integration of the SEA process for the CAP plan is in multiple breach of the SEA process

Successive Irish Ministers of Agriculture have adopted the practice of defining national food, agriculture and fisheries policy, by the appointment of largely industry-based AgriFood committees to advise the Department on rolling ten-year industry plans, which are then endorsed by the Department as national policy.

This practice has been carried out on a rolling basis with successive Minister-appointed committees to produce ten-year strategies. However, in practice new committees are appointed every five years to set out new ten-year strategies, to supersede the previous strategy. These AgriFood Committees, including those that produced the content of FoodWise 2025 in 2015, have no legal or statutory constitution or basis. It has been the practice of successive Agriculture Ministers to adopt the recommendations of these Committees as the food industry strategy of the Department of Agriculture and Marine, and therefore Government policy, on an ongoing basis.

Following complaints on SEA avoidance for previous agri-food strategies, the Department initiated an SEA process for the consultation on the proposed ten-year FoodWise 2025 strategy in 2015. However, while the strategy was subject to the SEA process, no implementation measures were put in place for explicit monitoring and remediation as required by Article 10.

2.1 Prematurity of AgriFood 2030 Committee undertaking new AgriFood 2030 Strategy for Department of Agriculture and the Marine without addressing remediation of significant adverse effect of current FoodWise 2025 strategy

In November 2019, the then Minister for Agriculture, Food and Marine, Michael Creed, appointed a non-statutory 30-member AgriFood Committee under the Chair of economist Tom Arnold, to oversee a new ten-year 2020 strategy to 2030 to supersede the Foodwise 2025 ten-year strategy which was adopted with SEA in 2015.

In the press statement[5] on the announcement of the Committee membership and brief, Minister Creed commented:

> *"Since their inception 20 years ago, up to the current FoodWise 2025 plan, a rolling series of ten year strategies have ensured that we have a coherent, stakeholder-led vision to underpin the development of the sector. The success of these strategies is evidenced by a 73% growth in agri-food exports since 2009*".

In June 2020, the then Minister for Agriculture and Marine appointed external UK consultants RSK to undertake the SEA Environmental Report and associated work for the new AgriFood 2030 strategy. The Department's brief to RSK for undertaking a new AgriFood strategy to 2030 failed to address that:

1. The existing ten-year strategy FoodWise 2025, which was approved in 2015, had five years yet to run;
2. FoodWise 2025 was subject to SEA in 2015, and thereby subject to the obligation for ongoing monitoring and remediation of adverse effects;
3. The monitoring information which the Department possessed via the Environmental Sustainability Committee, a sub-group of the High Level Implementation Committee (HLIC) for FoodWise 2025, showed significant unforeseen adverse effects in a report produced earlier in 2020 (see section 3.2 below).

It is an abrogation of legal responsibility by the Department of Agriculture and the Marine that the current advancing of a new ten-year AgriFood 2030 strategy under the SEA Directive and seeking to supersede the existing FoodWise 2025 at its midterm point, should fail entirely to address the SEA status and compliance of the existing Strategy, including the monitoring and remediation of significant adverse effects.

2.2 Failure of AgriFood 2030 Committee and the Department of Agriculture and Marine to address implication of "Environmental Sustainability Committee report to the 2030 Agri Food Strategy Group ESC Environmental Monitoring", circulated to AgriFood 2030 Committee in May 2020

The monitoring which has been carried out by the Department of Agriculture and Marine-coordinated High Level Implementation Committee (HILC), and in particular set out in the May 2020 circulated " "*Environmental Sustainability Committee report to the 2030 Agri Food Strategy Group ESC Environmental Monitoring*", shows a range of unforeseen adverse effects not projected in 2015 (see Appendix 1).

This report shows that greenhouse gas emissions, dairy cow numbers and fertiliser use in 2019 exceeded the projections for 2020, on which the 2015 SEA process and projections were based. The report then went on to state that there was "*Continued decline in water*

[5] https://www.gov.ie/en/press-release/a81790-creed-announces-stakeholder-committee-to-develop-irelands-agri-food-/?referrer=http://www.agriculture.gov.ie/press/pressreleases/2019/november/title,136214,en.html

quality since 2013" and an exceedance of the EU Emissions Ceilings Threshold for ammonia since 2016, 98% caused by agriculture and continuing. On biodiversity the County Bird survey on 51 species (1998 -2016) is cited in stating that, "*26% of the species are in decline*".

However, no effective action was proposed on remediating those impacts as required by Article 10 of the SEA Directive. On page 5 the report concluded: "*We can see that the reality of what happened differed to the projected, with approx. 200,000 head in national herd primarily driven by approx. 100,000 dairy cows and their offspring*."

This does not recognise that Irish dairy industry expansion has now passed the tipping point of unsustainability in intensification of nitrate fertiliser forced grassland, dependence on feed import, expansion of milking parlour capacity, and expansion of milk powder and cheese factory processing. These have multiple adverse impacts, including on human health with ammonia air pollution exceeding EU emission ceiling levels since 2016, greenhouse gases, nitrates impact on water quality, and biodiversity impact including farm bird loss. There is also inadequate research on chemicals and pesticides on bees and other pollinators.

The SEA Directive includes a specify objective in the schedule of consideration to consider impact of human beings. There has been a systemic failure to monitor and assess worker conditions in meat factories and on fishing boats

In relation to the new AgriFood 2030 strategy to supersede FoodWise 2025, it was recommended only that: *"The 2030 Strategy should consider including a tighter set of environmental KPIs that are SMART (specific, measurable, actionable, realistic and time bound) in line with Government policy and national, EU and international commitments."*

3. Systemic nature of the breaches of EU Law

It is submitted that the breaches, subject of this complaint on the initiation of the process for the Draft CAP Plan and its lack of integration with the parallel AgriFood 2030 SEA process and ongoing monitoring and lack of remediation of the adverse of FoodWise 2025, are systemic.

There is a general failure to ensure oversight and monitoring of a SEA-based plans or programmes once adopted and to determine whether quantitative "*unforeseen adverse effects*" arise in the course of the implementation of the plan or programme.

3.1 Fourth Nitrates Action Programme

The fourth Nitrates Action Programme was subject to the SEA process in 2018, including provision to allow continued Nitrates Derogation under the Nitrates Directive. The same considerations apply to the monitoring and remediation of significant adverse effects arising from the Nitrates Action Plan, as that arising from FoodWise 2025.

The SEA for the fourth Nitrates Action Programme (NAP) outlines the purpose of the NAP:

> *"At a broad level, implementation of the NAP is expected to protect surface and ground water quality and, as such, outlines measures to provide better control and management of agricultural practices. These measures, when implemented correctly, will have significant positive effects on water quality, biodiversity and public health*"

and further outlines that:

> *"The Minister for Agriculture, Food and the Marine is responsible for the monitoring of the NAP. This responsibility is prescribed in the NAP in Article 27(1) where it states that: The Minister for Agriculture, Food and the Marine shall carry out, or cause to be carried out, such monitoring and evaluation programmes in relation to farm practices as may be necessary to determine the effectiveness of measures being taken in accordance with these Regulations."*

The plan lists existing programmes such as the Article 17 National Parks and Wildlife Service reporting for biodiversity and the Environmental Protection Agency's Water Framework Directive monitoring for water quality to provide this ongoing NAP monitoring, and outlines that:

> "*It is envisaged that monitoring and reporting of environmental impacts, both positive and negative, resulting from implementation of the Nitrates Action Programme will continue over the course of the lifetime of the programme in line with the monitoring programme presented. Where unforeseen impacts are identified through monitoring, remedial action will be taken by the DHPLG and DAFM, as appropriate."*

While extensive data has been provided by numerous bodies including the NPWS on biodiversity declines and the EPA on water quality declines with clear links to agriculture and failures of the Nitrates Action Programme (see the summary of adverse effects linked to FoodWise 2025 earlier in this submission), no evaluation has been carried out by DAFM, or effective remedial action taken on foot of this data as required by Article 10 of the SEA Directive.

CONCLUSION

Failure to address the issues raised in this infringement complaint would expose the State to multiple legal actions both at National and European Court levels.

We look forward to your response.

Yours sincerely,

Ian Lumley
Head of Advocacy
An Taisce – The National Trust for Ireland

Phoebe Duvall
Planning and Environmental Policy Officer
An Taisce – The National Trust for Ireland

Part 2: Consideration of Issues for the Draft Scoping Report

The following sections outline key considerations that should be addressed in the Strategic Environmental Assessment for the CAP Strategic Plan 2023-2027.

Introduction and Policy Considerations

Agriculture dominates land use in Ireland, accounting for 63% of Ireland's almost 7 million hectares[6]. 60% of the country's agricultural output is beef and dairy products with much of the agricultural area devoted to grassland to support these activities. Crucially, bovine agricultural intensification is increasing rapidly across Ireland, particularly with regard to the dairy herd. This is a direct result of Irish agri-food policy.

As demonstrated in Figure 1 below, the growth in Ireland's dairy herd is exceptional when compared to the other EU nations. Total dairy cow numbers have reached approximately 1.57 million as of June 2020[7], an approximately 3.7% increase on the 2019 figures.

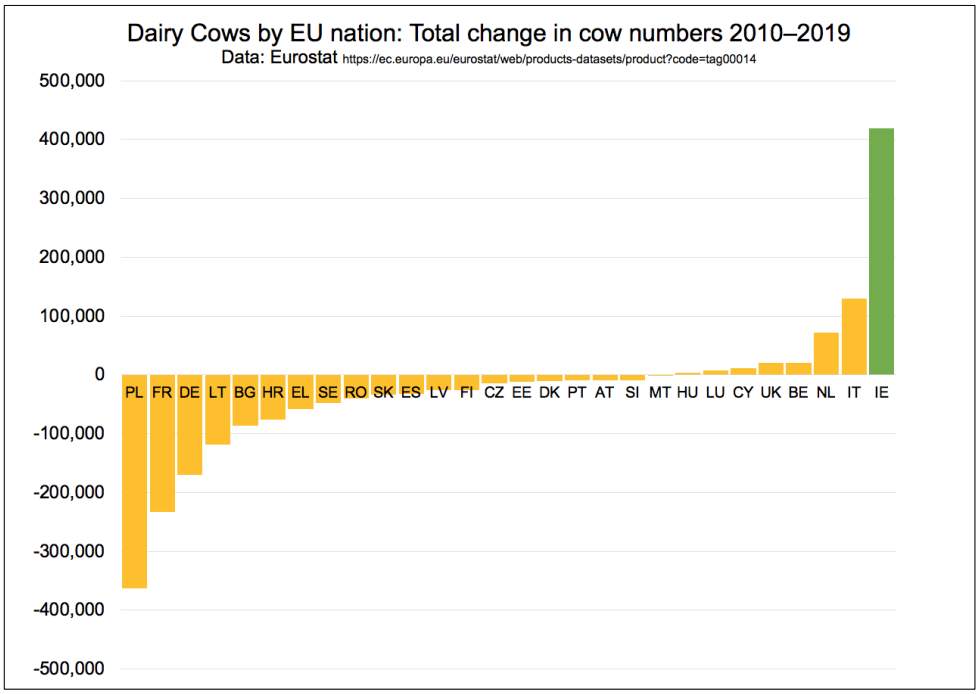


***Figure 1**. Total change in dairy cow numbers 2010–2019 by EU Member State, with Ireland shown in green. Chart by An Taisce, data from Eurostat[8].*

[6] National Parks and Wildlife Service (2019) Ireland 6th National Report to the Convention on Biological Diversity: https://www.npws.ie/sites/default/files/files/NPWS%20Biological%20Diversity%20web.pdf

[7] Total dairy cow numbers in Ireland: https://www.icbf.com/?p=17201#:~:text=Total%20dairy%20cow%20numbers%20for,3.7%25%20from%201%2C514%2C617%20in%202019; There are some differences in dairy cow numbers from different data sources but all seem to hover around 1.5 million in 2020 (see additional data in note 3 below)

An Taisce would highlight the following quote from the Environmental Protection Agency's (EPA) submission[9] to the AgriFood 2030 strategy (the proposed strategy to follow FoodWise 2025):

> *"A core principle of FoodWise 2025 was that 'environmental protection and economic competitiveness are equal and complimentary- one will not be achieved at the expense of the other'. The strategy also stated that 'future food production systems must be focused on managing and sustaining our natural resources as they are on increasing production'. The evidence is now showing that these two objectives have not been met*
>
> *FoodWise 2025 has delivered the intensification and growth in production that it promised but has not provided the environmental protection objective envisaged- the natural environment has deteriorated during the strategy period, with trends in water quality, greenhouse gases, ammonia and biodiversity all going in the wrong direction. It is also clear from the evidence that agriculture and other land management practices are key drivers of these negative trends*
>
> *Many actions set out for farmers under current politics to help with tackling climate change and other environmental challenges are based on driving efficiencies, with the inherent assumption that if farms are efficient they will be environmentally sustainable, which is not the case."*

Overarching Policy Considerations

Since the CAP review process was initiated there has been a significant change of circumstances. In May 2020 in furtherance to the European Green Deal, the European Union adopted two overlapping strategies: 'Farm to Fork Strategy – for a fair healthy and environmentally health food system' and 'EU Biodiversity Strategy for 2030 - Bringing nature back into our lives'.

The latter sets out a 14-point EU Nature Restoration Plan, with most of the objectives relating to agriculture:

1. *Legally-binding EU nature restoration targets to be proposed in 2021, subject to an environmental impact assessment. By 2030, significant areas of degraded and carbon-rich ecosystems are restored; habitats and species show no deterioration in conservation trends and status; and at least 30% reach favourable conservation status or at least show a positive trend.*
2. *The decline in pollinators is reversed.*

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[8] Eurostat data on changes in European dairy cow numbers: https://ec.europa.eu/eurostat/web/products-datasets/product?code=tag00014

[9] https://www.epa.ie/pubs/epasub/EPA%20Submission%20on%20Proposed%20Strategy%20for%20the%20Irish%20Agri-Food%20Sector%20to%202030%20-%20October%202019.pdf

3. *The risk and use of chemical pesticides is reduced by 50% and the use of more hazardous pesticides is reduced by 50%.*
4. *At least 10% of agricultural area is under high-diversity landscape features.*
5. *At least 25% of agricultural land is under organic farming management, and the uptake of agro-ecological practices is significantly increased.*
6. *Three billion new trees are planted in the EU, in full respect of ecological principles.*
7. *Significant progress has been made in the remediation of contaminated soil sites.*
8. *At least 25,000 km of free-flowing rivers are restored.*
9. *There is a 50% reduction in the number of Red List species threatened by invasive alien species.*
10. *The losses of nutrients from fertilisers are reduced by 50%, resulting in the reduction of the use of fertilisers by at least 20%.*
11. *Cities with at least 20,000 inhabitants have an ambitious Urban Greening Plan.*
12. *No chemical pesticides are used in sensitive areas such as EU urban green areas.*
13. *The negative impacts on sensitive species and habitats, including on the seabed through fishing and extraction activities, are substantially reduced to achieve good environmental status.*
14. *The by-catch of species is eliminated or reduced to a level that allows species recovery and conservation.*

A healthy planet and ecosystem, human health and wellbeing, healthily produced food, and healthy rural societies and economies are all integrated in the Farm to Fork strategy, which is importantly subtitled "for a fair, healthy and environmentally-friendly food system*".*

The SEA must take account of the alignment of the new CAP Strategic Plan with the *specific objectives* of these policies.

1. Greenhouse Gas Emissions and Ammonia Air Pollution

1.1 Greenhouse Gas Emissions Since 2015: continued increases

Despite national EU Effort Sharing Regulation (ESR) emissions reduction requirements the annual limit values have been exceeded since 2016. Provisional figures for 2020 indicate that agricultural emissions will exceed 37% of total national greenhouse gas emissions and are now approaching half of the ESR emissions. Agricultural emissions increased by 8.7% over the five-year period 2014-19; the sector's methane emissions have increased by 10% and nitrous oxide (N_2O) emissions have increased over 7.7%. Cattle emit over 90% of agricultural methane.

As shown in Figure 2 below, Ireland's agriculture sector greenhouse gas emissions (GHG) emissions had decreased steadily from 2005 until 2011 under the EU milk quota constraining milk production and EU policies in support of beef cattle extensification. However, from 2010 Irish Government policy had endorsed an industry-developed agri-strategy targeting increasing agricultural growth, particularly dairy expansion and continued levels of beef production.

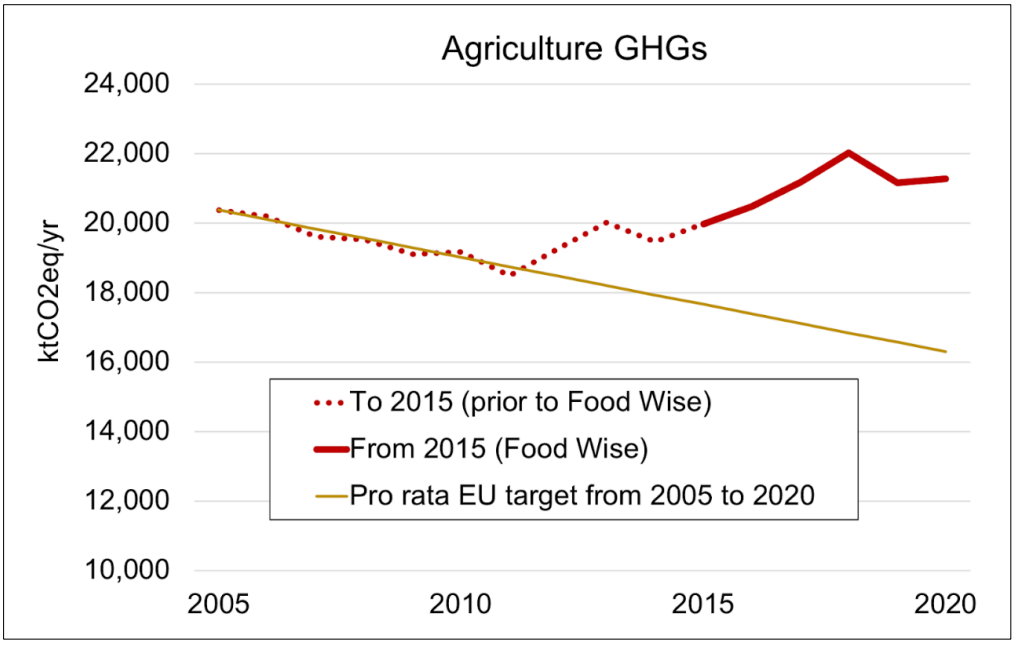


***Figure 2**. Ireland agricultural GHGs in ktCO2eq/year from 2005–2020. Chart by An Taisce from EPA 2020 data[10]. 2020 value is only approximate and is likely an under-estimate as it fails to account for the rise in dairy numbers.[11]*

We would highlight comments by the EPA[12] in their submission on FoodWise and the associated SEA:

> *"There are very significant risks to the environment associated with increasing animal numbers, the associated intensification and associated increases in food processing. These risks are to water quality, air quality, soil quality, biodiversity and climate. They are driven by:*
> - *Increases in the quantities of slurry (from cattle, pigs and poultry),*
> - *Increased greenhouse gas emissions,*
> - *Increased air pollution including particulate matter,*
> - *Increased nutrient inputs,*
> - *Increased effluent volume from increased food processing."*

[10] EPA, 2020. Ireland's Provisional Greenhouse Gas emissions 1990-2019 [WWW Document]. Environmental Protection Agency (EPA). URL https://www.epa.ie/pubs/reports/air/airemissions/ghgprovemissions2019/

[11] Environmental Protection Agency and Sustainable Energy Authority of Ireland (2021) The impact on 2020 greenhouse gas emisions of COVID-19 restrictions: https://www.epa.ie/pubs/reports/air/airemissions/ghgcv-19/SEAI-EPA%20Bulletin%20v1.7.pdf

[12] EPA, 2015. Submission to Food Wise 2025 and associated Draft Environmental Analysis.
European Commission, 2020a. REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL on the progress made on the implementation of Directive (EU) 2016/2284 on the reduction of national emissions of certain atmospheric pollutants.

From 2014, dairy cow numbers increased, as a result of FoodWise's "Vision for Growth", by 24% (288,000 cows) to 1,465,000 in 2019, while beef cattle numbers had only decreased by 0.4%. As predicted by the EPA and An Taisce in 2015, and then clearly documented in an NGO report – *Not So Green*[13], all of the EPA's documented threats have indeed occurred.

Irish agricultural growth policy has depended on efficiency measures proposed by the state agency Teagasc[14,15,16] to cut emissions. These "marginal abatement cost curve" (MACC) reports mention but do not make clear that the measures will *only* result in sectoral absolute emissions if dairy cow numbers *decrease*, contrary to policy and the MACC reports do not set out any regulatory options to ensure that this would occur.

As a result – in the absence of a milk quota, carbon taxes or nitrogen caps – the cost-savings and production increases from GHG intensity improvement measures such as the Carbon Navigator[17] and dairy and beef breeding indexing[18] have been reinvested in more fertiliser inputs and more cattle, resulting in rapidly rising GHG and ammonia emissions.

1.2 EPA 2019 Recalculation: upward revision of agricultural emissions

It is important to note that in November 2020, based on research findings the Environmental Protection Agency announced a significant update to the agricultural emissions timeseries showing that agricultural methane and nitrous oxide emissions since 2000 are substantially greater than had been thought. Figure 3 shows the previous and updated time series for 2000–2019. The sector's 2018 emissions were previously reported to be 20.6 $MtCO_2eq$, but the updated time series revises this to 22.0 $MtCO_2eq$, a substantial increase of 1.4 $MtCO_2eq$. This means that the climate impact at the beginning of FoodWise 2015 was underestimated and this should have been clear to government and industry experts as the basis for EPA reporting was from the early 2000s.

[13] https://environmentalpillar.ie/not-so-green-debunking-the-myths-around-irish-agriculture/
[14] Teagasc is the state funded Agriculture and Food Development Authority – is the national body providing integrated research, advisory and training services to the agriculture and food industry and rural communities.
[15] Teagasc, 2012. A Marginal Abatement Cost Curve for Irish Agriculture.
[16] Lanigan, G.J., Donnellan, T., 2018. An Analysis of Abatement Potential of Greenhouse Gas Emissions in Irish Agriculture 2021-2030. Teagasc.
[17] Murphy, P., Crosson, P., O'Brien, D., Schulte, R.P.O., 2013. The Carbon Navigator: a decision support tool to reduce greenhouse gas emissions from livestock production systems. Animal 7, 427–436. https://doi.org/10.1017/S1751731113000906
[18] Teagasc, 2020. 2020 - ICBF: Breeding for more Sustainable Beef Production - Teagasc | Agriculture and Food Development Authority [WWW Document]. URL https://www.teagasc.ie/publications/2020/icbf-breeding-for-more-sustainable-beef-production.php

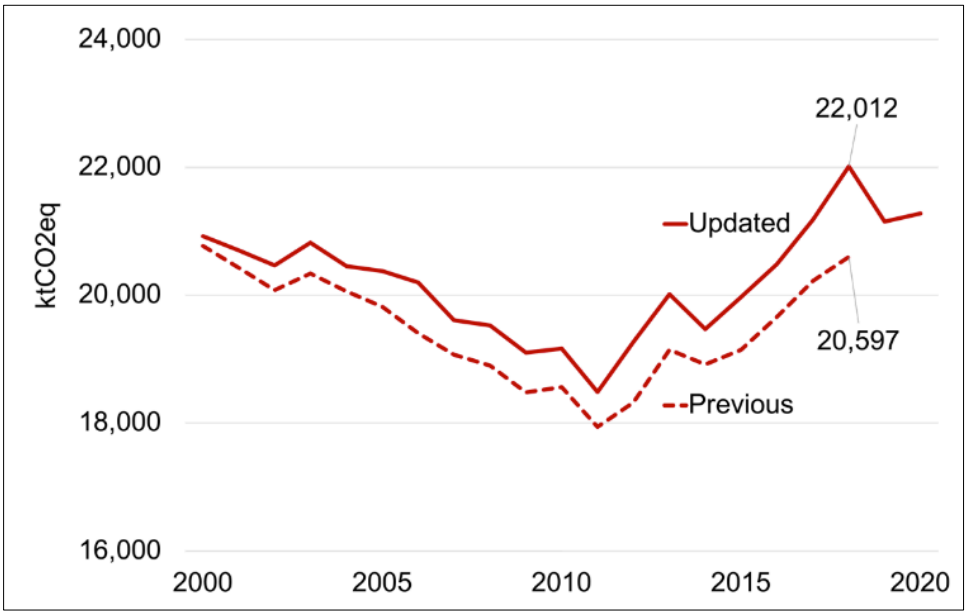


Figure 3. *Comparing previous and revised timeseries for agricultural GHG emissions in ktCO2eq Chart by An Taisce from EPA data[19]. Since 2000 previously reported agricultural emissions have been underestimated due to outdated low per cow dairy input feed data. The 2020 value is only approximate and is an under-estimate as it fails to account for the rise in dairy numbers[20]*

The agricultural emissions time series required the EPA Recalculation and upward revision because the rising per head annual methane emission and nitrogen losses from dairy cows were being significantly underestimated by the use of outdated methane and nitrogen values, as shown in the EPA presentation charts in Figure 4.

Figure 5 from the EPA's provisional emissions shows that dairy methane emissions are directly and linearly related to milk yield. Increased milk production results in increased methane emissions. The EPA 2019 Recalculation excreted also shows that nitrogen excretion per dairy cow has steadily increased with increasing milk yield. Excreted nitrogen results in nitrous oxide, ammonia air pollution and nitrate water pollution.

Notably the EPA data for 2018 and 2019 in Figure 4 and Figure 5 below show a substantial rise in methane emissions and nitrogen excretion rates relative to the per cow and milk yield trend lines. This indicates that milk production is being prioritised despite increased GHG emissions and nitrogen pollution per litre of milk.

[19] EPA, 2020. Ireland's Provisional Greenhouse Gas emissions 1990-2019 [WWW Document]. Environmental Protection Agency (EPA). URL https://www.epa.ie/pubs/reports/air/airemissions/ghgprovemissions2019/
[20] Environmental Protection Agency and Sustainable Energy Authority of Ireland (2021) The impact on 2020 greenhouse gas emisions of COVID-19 restrictions: https://www.epa.ie/pubs/reports/air/airemissions/ghgcv-19/SEAI-EPA%20Bulletin%20v1.7.pdf

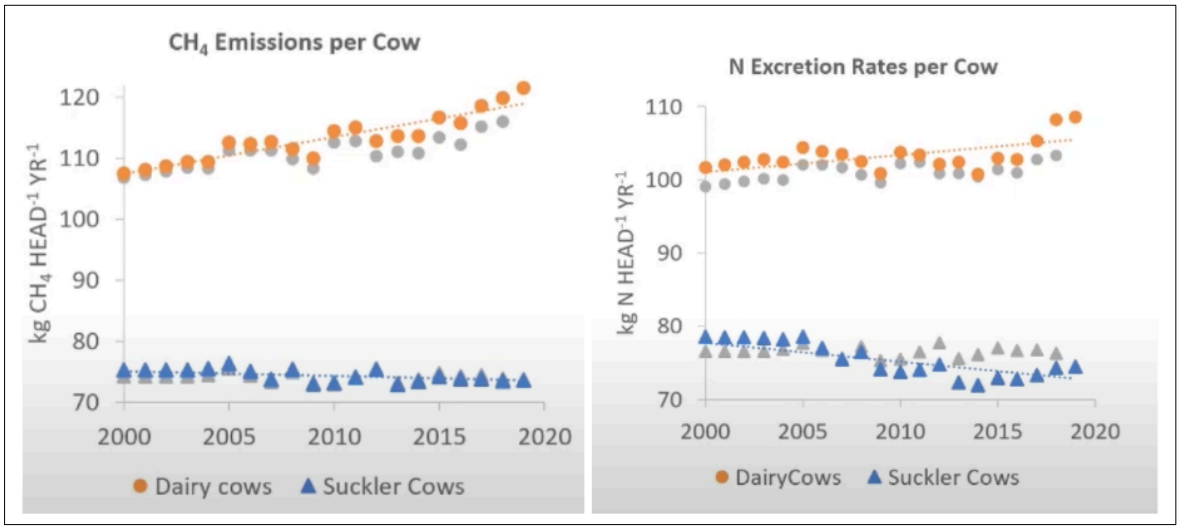


Figure 4. *EPA presentation charts showing updated time series for cattle annual per head methane and nitrogen excretion rates by the Environmental Protection Agency. Grey markers based on previous data, coloured markers for revised data*[21]

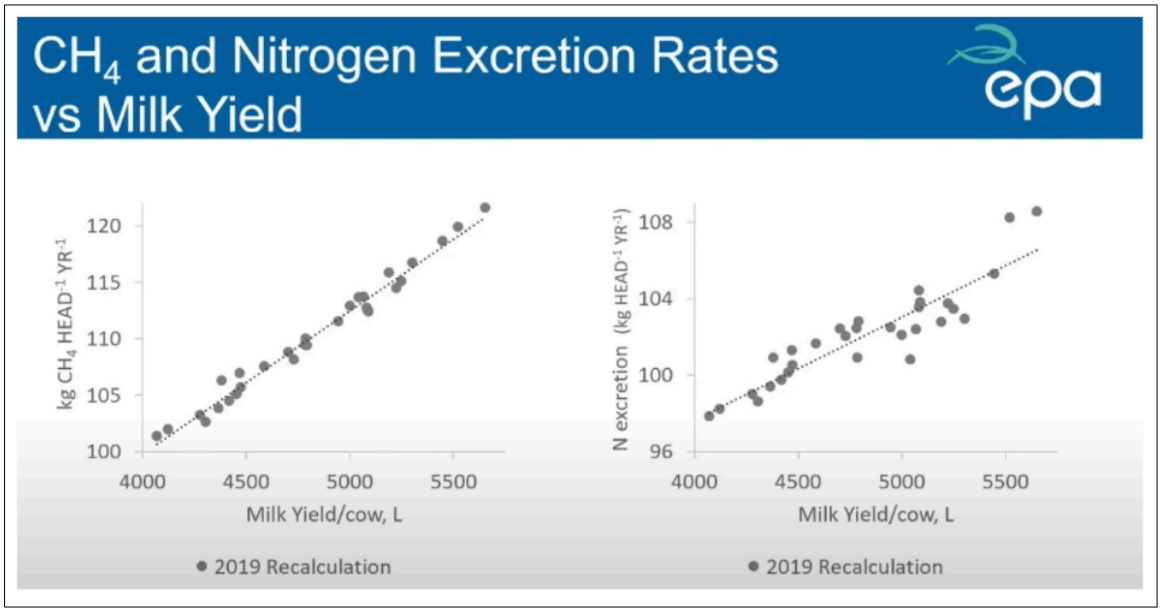


Figure 5. *EPA presentation charts showing 2019 Recalculation updated time series for cattle annual per head methane and nitrogen excretion rates by the Environmental Protection Agency*[22]

[21] EPA, 2020. EPA's James Murphy presents "Improvements to the Agriculture Inventory.
[22] Ibid.

1.3 Ammonia Air Pollution Since 2015: increasing steeply

Over 99% of Irish ammonia emissions are emitted by the agricultural sector[23]. Ammonia emissions had decreased from 1998 to 2011, but emissions increased after 2011 and, since 2015, emissions have increased even more rapidly than 2011–2015. Ireland exceeded its NEC ammonia emission ceiling in 2016, 2017 and 2018.

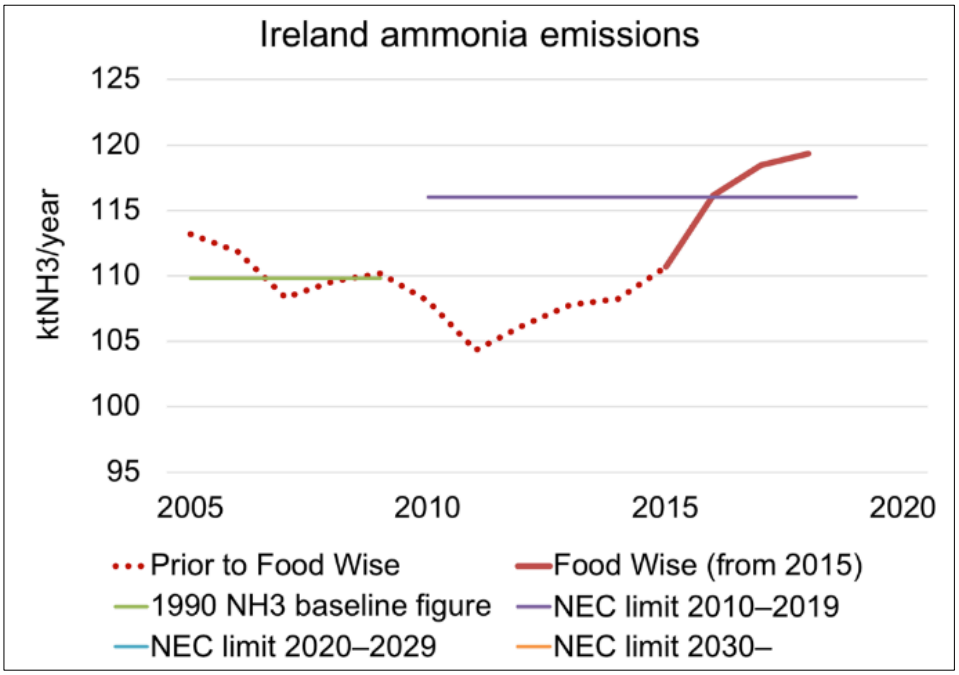


***Figure 6**. Ireland ammonia emissions from 2005, including NEC baseline and ceiling limits up to 2030. An Taisce chart using EPA data[24].*

The EPA[25] have stated:

> *"Our figures show that ammonia levels are on an upward trend, in tandem with increased agricultural production, and that they breached national limits in 2016 and 2017. This has implications for air and water quality. The National Air Pollution and Control Programme, currently out for public consultation, will need to address these emissions particularly as they are projected to increase further to 2030. The underlying driver for these emissions is the application of more animal manure to soils — mostly as an organic fertiliser — and the increase in the use of inorganic fertilisers."*

[23] EPA, 2020. Ireland 2020 GHG projections submitted under Article 14 of the EU Monitoring Mechanism Regulation: Table 1. Environmental Protection Agency (Ireland).
[24] EPA, 2019a. NECD Submission: Table 5.2. NH3 Recalculations for Agriculture 1990–2017. Enviromental Protection Agency (Ireland)
[25] EPA, 2019. EMISSIONS OF AMMONIA CONTINUE TO RISE: IRELAND'S AIR POLLUTANT EMISSIONS ON THE WRONG PATHWAY FOR CLEANER AIR [WWW Document]. URL https://www.epa.ie/mobile/news/previouspressreleases/name,65887,en.html

In its Review of EU Air Policy the European Commission[26] has assessed Ireland as being at high risk of non-compliance with agreed air pollution reduction commitments before and after 2030. Ireland's policies and measures to address ammonia pollution are deemed inadequate to meet the required limits even With Additional Measures[27]. An Taisce has repeatedly pointed out that Irish agriculture needs to make immediate cuts in intensive ruminant production if ammonia targets are to be met[28], rather than depending on unproven future measures.

The EPA's substantial upward adjustment of past and current dairy cow per head nitrogen excretion (Figure 5) appears certain to further increase ammonia emissions as well as nitrous oxide.

1.4 GHG and Ammonia Emission Trends: ineffective measures and growth policy

Ireland's agricultural greenhouse gas and ammonia emissions continue to be strongly correlated with reactive nitrogen inputs to intensive pasture dairy and beef production from chemical fertiliser to increase grass growth, and feed concentrate. In 2011 and 2012 chemical nitrogen use was 296,000 ktN, in 2018 and 2019 it was 408 ktN and 367 ktN, respectively with increasing usage projected. In addition to initial soil emissions, more chemical nitrogen produces more grass resulting in more carbohydrate for cattle enteric fermentation to methane and more manure with methane and nitrous oxide emissions.

In its 2020 roadmap for dairy, the state agency Teagasc, in support of Government policy continues to anticipate a further 12% increase in dairy cow numbers before 2027[29]. Teagasc claim that measures – efficiency gains, such as improved breeding, low emissions manure spreading, modest decrease in suckler numbers and changing fertiliser type, from CAN and urea to Protected Urea – will offset the policies of continued expansion[30]. In response, An Taisce[31] has questioned how Teagasc's climate mitigation projections can be credible, given

[26] European Commission, 2020a. REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL on the progress made on the implementation of Directive (EU) 2016/2284 on the reduction of national emissions of certain atmospheric pollutants

[27] European Commission, 2020b. ANNEXES to the Report from the Commission to the European Parliament and the Council on the progress made on the implementation of Directive (EU) 2016/2284 on the reduction of national emissions of certain atmospheric pollutants.

[28] An Taisce, 2019, Comment on: Code of Good Agricultural Practice for Reducing Ammonia Emissions from Agriculture; An Taisce, 2020a. Department of Agriculture not doing enough to reduce ammonia emissions - The National Trust for Ireland - An Taisce [WWW Document]. https://www.antaisce.org/ag-department-not-doing-enough-on-ammonia; An Taisce, 2020b. Silent killer - spiralling agri pollution threatens rural and urban lives - The National Trust for Ireland - An Taisce [WWW Document]. URL https://www.antaisce.org/ammonia-air-pollution-health-hazard

[29] Teagasc, 2020. 2020 - ICBF: Breeding for more Sustainable Beef Production - Teagasc | Agriculture and Food Development Authority [WWW Document]. URL https://www.teagasc.ie/publications/2020/icbf-breeding-for-more-sustainable-beef-production.php

[30] AgriLand, 2019. Frank O'Mara: Is reduction in the national herd needed? [WWW Document]. Agriland.ie. URL http://www.agriland.ie/farming-news/frank-omara-is-reduction-in-the-national-herd-needed/

[31] An Taisce, 2019, Are Teagasc's climate mitigation projections credible? An Taisce.

the evident failure since 2012 of past similar measures to offset output growth[32]. An Taisce has also repeatedly attempted to engage with the state agency on a scientific basis without any substantive reply[33].

Despite exceeding the mandatory ammonia ceiling since 2016, repeated warnings from the EPA, and the evident ineffectuality of measures to date, Ireland's new *Code of Good Agricultural Practice for reducing Ammonia Emissions from Agriculture* merely sets out guidance for more voluntary measures[34]. Moreover, the change to protected urea (PU) fertiliser advocated by Teagasc is intended to reduce nitrous oxide emissions but PU has higher ammonia emissions than the most used CAN fertiliser so any reduction depends on standard urea being removed from the market entirely. Neither FoodWise nor recent Department of Agriculture or Teagasc documents display any understanding that a mandatory ammonia ceiling means meeting this binding target now (requiring ruminant output reduction), not just at some point in future.

1.5 Forestry: reduced carbon removals imply more agricultural mitigation

Kenny et al. (2018)[35] find that Irish agricultural strategy and policy development emphasises a 'business as usual' approach based on "*economic priorities of specialisation, intensification and concentration*" and "*reducing GHG emissions was framed as being reliant on a possible expansion of forestry, a technical fix or a simple change of measurement*." FoodWise continued to place a heavy emphasis on increasing annual forest carbon sequestration to reduce the climate mitigation requirement from agriculture:

> *Increased contribution of forest based biomass, carbon sequestration and wood products use to reduce climate change mitigation (DAFM, 2015, p. 97)*[36]

and:

> *After wind energy, wood fuels are the largest contributor to renewable energy generation in Ireland, while forests' contribution to climate change mitigation through carbon sequestration and the use of wood products form an important element of the national climate change strategy. Latest estimates show that, after taking harvest and wood use into account, forests established since 1990 will remove from the atmosphere a net 3.4 million tonnes in 2015; by 2025 the rate of removal is projected to be in the region of 4.7 million tonnes. (DAFM, 2015, p. 98)*[37]

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[32] Teagasc, 2012. A Marginal Abatement Cost Curve for Irish Agriculture.
[33] An Taisce, 2019c. 2017 Correspondence between Teagasc and An Taisce regarding agriculture and greenhouse gas emissions [WWW Document]. URL https://www.climatechange.ie/2017-correspondence-between-teagasc-and-an-taisce-regarding-agriculture-and-greenhouse-gas-emissions/; An Taisce, 2019d. An Taisce raises serious concern at recent reported remarks by Teagasc Director [WWW Document]. An Taisce - The National Trust For Ireland. URL https://www.antaisce.org/news/at-questions-teagasc-director-remarks
[34] DAFM, 2019. Code of Good Agricultural Practice for reducing Ammonia Emissions from Agriculture.
[35] Kenny, T., Cronin, M., Sage, C., 2018. A retrospective public health analysis of the Republic of Ireland's Food Harvest 2020 strategy: absence, avoidance and business as usual. Critical Public Health 28, 94–105. https://doi.org/10.1080/09581596.2017.1293234
[36] DAFM, 2015. Food Wise 2025 High Level Implementation Committee (HLIC) Meeting 25th November 2015.
[37] Ibid.

In fact, the EPA state higher forest land removals in 2015 of 4.9 $MtCO_2$ but the EPA project the rate of forest CO_2 removals will fall rapidly to only 1.2 MtCO2 in 2025. Managed forest land is already a net emitter, and the forest land use sector is projected to become a net emitter from 2030 onward with an average emissions for 2030–2040 projected to be 0.9 $MtCO_2$ in emissions (rather than removals).

For removals, it is more meaningful to combine the removals from forest land and Harvested Wood Products (HWP), as the EPA modelling increases HWP if forest land removals are reduced by harvesting forest. Figure 6 below shows annual and cumulative charts comparing EPA sequestration projections with a scenario of stable sequestration of 5.5 MtCO2eq/year based on the 2015–2020 averages for forest land and HWP. EPA projections show a steady reduction in removals from 5.5 $MtCO_2$/yr to about 1 $MtCO_2$/yr by 2033, due to non-achievement of afforestation targets and excess harvest relative to historic planting rates.

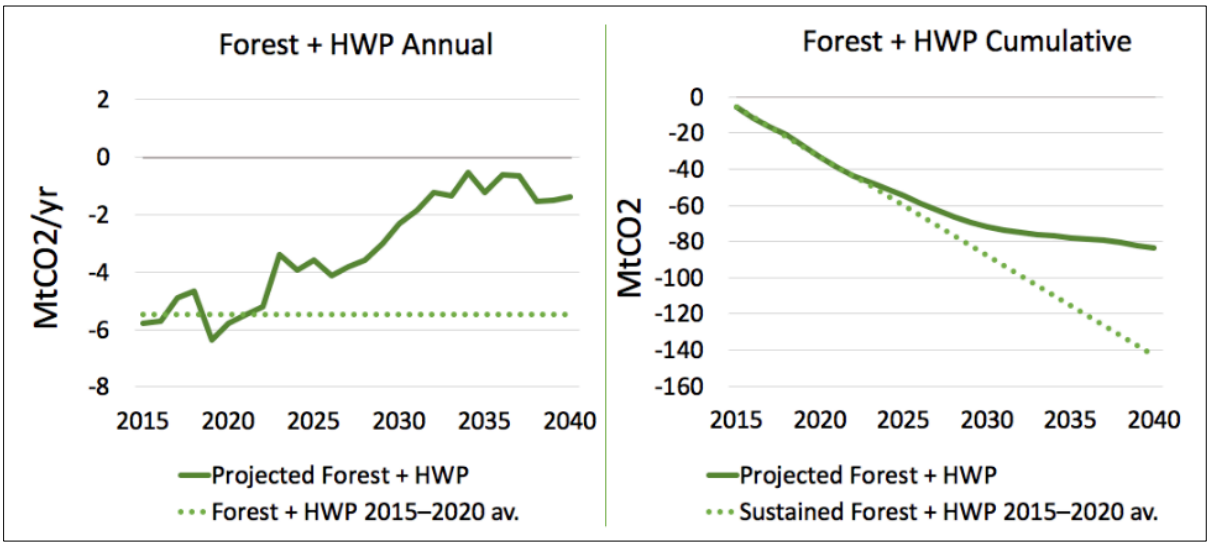


Figure 7. *Annual and cumulative charts) showing Forestland and Harvested Wood Product removals as projected by EPA (solid line) and as per a scenario of constant removals at the average 2015–2021 rate (dotted line). Chart by An Taisce using EPA data*[38]*.*

Most importantly for climate action, what matters is minimising cumulative total future emissions and maximising cumulative removals (within biodiversity and ecological limits). Compared to stable Forest and HWP removals, the current projections indicate a shortfall of 58 $MtCO_2$. Following the logic given by FoodWise the *reduced* contribution of forest-based biomass, carbon sequestration and wood products, implies a need to *increase* climate change mitigation from agriculture and other land use to compensate for it.

[38] EPA, 2020b. Ireland 2020 GHG projections submitted under Article 14 of the EU Monitoring Mechanism Regulation: Table 1. Environmental Protection Agency (Ireland).

2. Water Quality Deterioration

In Ireland the national coordination of the technical aspects of the Water Framework Directive (WFD) falls under the remit of the Environmental Protection Agency, including the establishment of programmes for the monitoring of water status in order to establish a comprehensive overview of water status for assessing WFD compliance.

The most recent data on water quality was provided from 2019 by the EPA in the Water Quality Indicators report[39], which highlighted that agricultural activities are the most significant source of pollution for Irish waters, with a direct impact on 53% of the 1,460 water bodies monitored. Critically the report outlines:

> *"Of significant concern is the finding that nitrate is increasing in nearly half of our river sites. Phosphate levels are also on the rise in a quarter of river sites. This is in sharp contrast to the picture prior to 2015 when only a small proportion of sites had increasing nitrate and phosphate concentrations (1.4% and 4.2%, respectively)."*

This time period directly coincides with the lifting of dairy quotas in Ireland in 2015 and the publication of the FoodWise 2025 strategy, also in 2015.

These results build on those from the more comprehensive EPA report in 2019[40], which presented the results of the second six-year assessment undertaken since the introduction of the Water Framework Directive (WFD) for 2013-2018[41], providing a full assessment of the state of Ireland's aquatic environment, including the ecological and chemical status of Ireland's surface waters and the quantitative and chemical status of its groundwater resource.

That report highlighted that more than half our rivers, lakes and estuaries (47%; 49.5%; and 62% respectively) are in less than good status. It outlined that while phosphate pollution can be attributed to agriculture, sewage and industry, levels of nitrate pollution are strongly linked to increasing dairy intensification, with clear trends of increasing nitrogen pollution in the south and south-east of the country, the area which has seen the fastest intensification of dairy farming. The following excerpt is particularly critical:

> *"there has been an overall decline in surface water quality, especially in our rivers, following a period between 2004 and 2012 when overall water quality levels had improved, albeit with persistent deterioration of our highest quality waters. This recent net decline in water quality means meeting the targets set in Ireland's River Basin Management Plan 2018-2021* ***will be extremely challenging unless urgent steps are taken to address the causes of deterioration****. The increase in nutrient concentrations, which coincide with areas impacted by agricultural*

[39] Environmental Protection Agency (2020) Water Quality in 2019: An Indicators Report. https://www.epa.ie/pubs/reports/water/waterqua/waterqualityin2019-anindicatorsreport.html
[40] Environmental Protection Agency (2019) Water Quality in Ireland 2013-2018. https://www.epa.ie/pubs/reports/water/waterqua/waterqualityinireland2013-2018.html
[41] Ibid.

activities, are a particular concern, in the context of the ambition for further growth in the sector under the FoodWise 2025 strategy." [An Taisce emphasis]

The EPA began sounding the alarm on the risks posed by agricultural intensification as far back as 2016[42], to no avail:

> *"The ongoing and planned expansion in the agricultural sector under Food Harvest 2020 and its successor, Food Wise 2025 may threaten improvements in water quality, if not adequately managed.....Under the expansion plans, increased application of nitrogen and phosphorus to agricultural land is likely to happen in areas of the country where the concentrations of these nutrients in water are already elevated.....More targeted management measures are needed in the agricultural sector to accelerate the improvements required to achieve environmental targets set for waters"*

All of these waterbodies are subject to basic regulation, and as such these trends would appear to be indicative of the ongoing failure of the Good Agricultural Practice (GAP) Regulations implemented to prevent water pollution. Indeed, the Teagasc Agricultural Catchments Programme[43] showed that a pathway-receptor model should be implemented in order to address nutrient runoff, and that nutrient transfer pathways are key to understanding the transport of pollutants to water. Additionally EPA research highlighted that nutrient source pressures and transfer pathways vary considerably throughout different regions of the country depending on several factors, including soil type and geology[44].

The EPA State of the Environment Report 2016 highlighted that: *"the national farm inspection regime is currently focussed on the farmyard. However, a significant proportion of pollution can arise from agricultural land"*

And further EPA work from 2016[45] indicated that: *"achieving successful WFD outcomes depends on having a site-specific, three dimensional understanding of contaminant transfer pathways".*

Despite this, there has been no change in the GAP regulations, and no move to a three-dimensional pathway analysis, as repeatedly highlighted to be necessary.

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[42] Environmental Protection Agency (2016) Ireland's Environment, An Asssessment: http://www.epa.ie/pubs/reports/indicators/SoE_Report_2016.pdf

[43] Teagasc (2017) Agricultural Catchments Programme Phase 2 Report. Teagasc, Wexford https://www.teagasc.ie/media/website/publications/2018/ACP_Phase_2_Report.pdf

[44] 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. Available at: https://www.epa.ie/pubs/reports/research/water/STRIVE_56_Archbold_ContaminantsPathwaysReview_web.pdf

[45] Deakin, J., Flynn, R., Archbold, M., Daly, D., O'Brien, R., Orr, A., and Misstear, B. (2016) Understanding pathways transferring nutrients to streams: review of a major Irish study and its implications for determining water quality management strategies. Biology and Environment: Proceedings of the Royal Irish Academy, Vol. 116B, No.3 pp. 233-243

Beyond the establishment of the Agricultural Sustainability Support and Advisory Programme (ASSAP)[46] in a very limited subset of areas (190 Areas for Action), there does not appear to be rigorous integration of WFD concerns in Ireland's ongoing expansion of the dairy sector, and general intensification of agriculture. EPA data clearly highlights that the Cross Compliance measures are not sufficient to protect water quality.

Worryingly, the Teagasc Strategy[47] for the dairy sector (launched in November, 2020) envisages yet further increases in dairy cow numbers to 1.65 million by 2027, which will further exacerbate the problem.

3. Biodiversity Losses

Habitat and species declines have been linked to changing agricultural practices over recent years, particularly of traditional farmland bird species and pollinator species. This has been documented by the National Parks and Wildlife Service (NPWS), Birdwatch Ireland the National Biodiversity centre (referenced below).

3.1 Natura 2000 sites

3.1.1 Protected habitat impacts

The latest NPWS Article 17 report[48] (covering the period 2013 to 2019) to the European Commission on the status of EU protected habitats and species in Ireland highlighted that 85% of the 59 listed habitats in Ireland are in unfavourable status, with almost 40% of these described as being in 'bad' condition. 46% of habitats have demonstrated declines since the last reporting period (2007-2013). The predominant pressure on EU protected habitats is agriculture, which was found to impact on over 70% of habitats, being ranked of high importance in more than 50% of habitats.

Of the agricultural pressures, intensive grazing and overgrazing was the most prevalent pressure, recorded in 55% of habitats in which agricultural impacts are noted (39% of habitats overall). In regard to air pollution caused by agriculture, the three most vulnerable habitats exposed to exceedance of nitrogen deposition threshold were blanket bog, alpine heath and wet heath, all three of which are in bad status. Three marine habitats were also strongly affected by pollution from agricultural activities.

Grasslands, such as orchid-rich grasslands and hay meadows, have undergone significant losses over the last 10-15 years, with 31% and 28% of the area monitored respectively reported as being lost. These habitats are threatened either by intensification of farming or insufficient grazing and abandonment.

[46] https://www.teagasc.ie/publications/2020/agricultural-sustainability-support-and-advisory-programme-assap.php
[47] https://www.teagasc.ie/publications/2020/2027-sectoral-road-map-dairy.php
[48] National Parks and Wildlife Service (2019). Available from https://www.npws.ie/publications/article-17-reports/article-17-reports-2019

3.1.2 Protected species impacts

For EU protected species, impacts of agricultural activities, and to a lesser extent forestry, were reported as having a negative effect on a wide range of species, including fish, molluscs, terrestrial mammals and vascular plants. This is due to the wide sphere of influence of some of these activities which, though implemented at relatively local levels, may influence a much wider area, particularly if they affect groundwater supplies or nearby watercourses. Examples given by the NPWS included drainage, fertiliser application and clear-felling. The agriculture category represents the highest percentage of 'high-importance pressures' relative to other categories, with the incidence predicted to increase over the next 12 years; this has been linked to the threat from fertiliser and pollution on selected fish species.

3.2 Convention on Biological Diversity

NPWS in the 6th National Report on the Convention on Biological Diversity (2019)[49] voiced concern about the safeguards built into FoodWise 2025:

> *"In particular, agriculture, forestry and aquaculture are all aiming for significant target increases in output, or output value, under the Food Wise 2025 strategy. Although in principle, the strategy contains safeguards for biodiversity, water quality and carbon emissions, it is often unclear how these will be applied at producer level."*

Pertinently, the same document included this critique of the SEA process in Ireland: *"more evidence of proactive implementation of recommendations and mitigation measures is needed. In many of the cases examined, monitoring has relied on general data (e.g. as provided by EPA) and has not been adequate."*

3.3 Countryside Birds

Two thirds of Ireland's regularly occurring wild bird species are Red or Amber-Listed Birds of Conservation Concern in Ireland[50]. Farmland birds in particular are continuing to show declines and no recovery from the catastrophic and steady crash in populations since the 70s and up to this day. Habitat loss/change and change in farming practices are leading causes of losses[51].

[49] DCHG 2019. Ireland's 6th National Report to the Convention on Biological Diversity. Department of Culture, Heritage and the Gaeltacht. https://www.npws.ie/sites/default/files/files/NPWS%20Biological%20Diversity%20web.pdf

[50] Colhoun K. & Cummins, S. 2013 Birds of Conservation Concern in Ireland 2014-19. Irish Birds 9:523-544. Available from: https://birdwatchireland.ie/birds-of-conservation-concern-in-ireland-2014-2019/

[51] Ibid.

The NPWS[52] outlined that:

> *"the decline or loss of farmland bird species such as corncrake, yellowhammer and corn bunting, are indicative of changes in agricultural practice and a nationwide reduction in mixed farming with small scale cereal growing, moving instead to specialisation in livestock production."*

3.4 Bee Declines

One third of our 99 wild bee species are threatened with extinction by 2030. Reasons for decline include: loss of habitat through conversion of low-intensity farmland and semi-natural land to intensive farmland, forestry and urban/ industrial use; loss of flowering plants as a food source due to changing farming practices are reasons for decline; poisoning from pesticide use[53].

The NPWS[54] further highlighted that:

> *"The decline in bees, butterflies and other insects has largely resulted from the effect of monoculture and the drive to ever higher levels of productivity characterised also by a loss or neglect of hedgerows, farmland edges and scrub."*

4. Health

Human health and wellbeing must be addressed in the SEA for the CAP Strategic Plan.

We would highlight that the School of Natural Sciences in Trinity College Dublin published two significant papers[55] in April 2020 under lead author Professor Mike Williams with the headline conclusion that: 'The Irish diet is unsustainable, nutritionally, financially and ethically'. It also stated that:

> "*The Irish diet is rich in unsustainable foods and is causing nutritional and financial problems – as well as seriously limiting our potential to limit the effects of global warming and nitrogen pollution*";

[52] DCHG 2019. Ireland's 6th National Report to the Convention on Biological Diversity. Department of Culture, Heritage and the Gaeltacht. https://www.npws.ie/sites/default/files/files/NPWS%20Biological%20Diversity%20web.pdf
[53] FitzPatrick Ú., Murray T.E., Byrne A., Paxton R.J., Brown M.J.F. (2006) Regional Red List of Irish Bees, Publ. Rep. to National Parks and Wildlife Service (Ireland) and Environment and Heritage Service (N. Ireland).
[54] DCHG 2019. Ireland's 6th National Report to the Convention on Biological Diversity. Department of Culture, Heritage and the Gaeltacht. https://www.npws.ie/sites/default/files/files/NPWS%20Biological%20Diversity%20web.pdf
[55] https://www.tcd.ie/news_events/articles/new-studies-show-irish-diet-is-unsustainable-nutritionally-financially-and-ethically/

and:

> "*The new research that pinpoints these worries also finds that we could make major improvements if adopting the EAT-Lancet 'planetary healthy' reference diet*[56]*."*

The two papers are available online and titled: "The Environmental Assessment of Diets" [57] and "A Combined Environmental and Nutri-Economic Assessment of Diets"[58].

4.1 Ammonia Air Pollution

Ammonia is a major by-product of animal-based agriculture that combines with other pollutants to form dangerous air pollutant particles with a diameter less than 2.5 micrometres (PM2.5), one of the most deadly forms of air pollution.[59] This small particulate matter is well known to be harmful to health, penetrating deep into the lungs, and is linked to higher death rates, respiratory problems, cardiovascular diseases, cognitive decline and low birth weights. A recent study found that at least 3000 premature deaths could be prevented annually in the UK by cutting ammonia emissions in half.[60]

However, research is required on health exposure of workers in agricultural facilities with high ammonia air pollution levels, and potentially greater exposure to respiratory diseases and viruses in view of the increasing exceedances of EU ammonia air pollution thresholds. Long-term chronic exposure may harm the respiratory system, and can inflame and irritate the airways[61]. The particular health impact of ammonia air pollution on the respiratory vulnerability of workers in agricultural facilities with high ammonia levels, in addition to impact on general population is not being property researched.

4.2 Meat Factory Employment Conditions

The high level of COVID-19 infection in meat factories requires research. A report from the European Federation of Food, Agriculture and Tourism Trade Unions (EFFAT) stated that Ireland has the second highest incidence of COVID-19 infections in meat factories (reported in Sunday Business Post July 5 2020 below)

[56] EAT Lancet: https://eatforum.org/eat-lancet-commission/eat-lancet-commission-summary-report/
[57] https://zenodo.org/record/3732026
[58] https://zenodo.org/record/3747542
[59] Lelieveld, et. al. (2015) "The contribution of outdoor air pollution sources to premature mortality on a global scale," Nature, 525: https://www.nature.com/articles/nature15371
[60] https://www.thebureauinvestigates.com/stories/2019-06-13/deadly-gas-ammonia-cutting-farm-emissions-could-save-3000-lives-a-year
[61] https://www.ccohs.ca/oshanswers/chemicals/chem_profiles/ammonia.html



Irish meat industry second in E

BY DANIEL MURRAY

Ireland's meat sector recorded the second highest number of Covid-19 infections in Europe, with difficult working and living conditions, fewer inspections and a slow response to outbreaks contributing to the high number of cases, a new trade union report has claimed.

The report from the European Federation of Food Agriculture and Tourism Trade Unions (EFFAT) catalogues the reasons for and responses to large outbreaks of Covid-19 in meat factories across Europe.

It said Ireland recorded 1,056 Covid-19 cases across 19 meat plants and this figure was the second highest in Europe, coming just behind Germany's meat industry.

In Ireland there are approximately 15,000 meat workers working in 49 meat plants. Twenty clusters of Covid-19 were identified in 19 plants, with some factories recording 25 per cent of its employees as being infected, according to the report.

"Because of Covid-19 the frequency of inspection is lower," EFFAT said in its report in comments referring to the industry across Europe and not specific to Ireland.

"Moreover, many of these plants were built in the 1960s, people work very close to each other, there is a bad ventilation system and the noise pollution also creates a problem as people have to shout to each other to communicate."

The report highlighted a lack of staff working in the sector because wages are low and conditions are difficult. As a result, it depends largely on migrant workers, particularly from Brazil and South Africa.

"As wages are too low, workers save costs in all possible manners. Carpooling is common. Moreover some workers have their accommodation linked to their employment contract. They get their salary and then they have to pay for their housing. Housing is normally extremely basic and rooms are shared," EFFAT said.

urope for Covid-19 infections

In May, Siptu, the trade union, called for a task force to be set up to address the issue of Covid-19 outbreaks in Irish meat plants amid concerns that best practice guidelines had not been followed. The union, which represents thousands of workers in dozens of meat plants, said workers were sometimes afraid to raise work-related issues due to their status as migrant workers.

"The slow response of government and some statutory authorities to the concerns of unions in the sector contributed to the high number of cases. Temperature testing at the entrance of production facilities is now happening in many companies but still not everywhere," EFFAT said.

The report said the lack of any active system of dialogue between stakeholders in the meat processing sector was an "obvious weakness".

Responding to the report, a spokesman from the group Meat Industry Ireland said the industry had taken effective action.

"Since mid-March, the meat processing industry has implemented an extensive range of measures to address the threat posed by Covid-19. The position on Covid-19 cases in the meat processing sector has significantly improved, similar to the overall national position," the spokesman said.

"As of today, there are no active cases in our meat plants. Our absolute focus is to maintain this position. Very substantial Covid-19 measures have been put in place and we can confirm that, of the staff affected, over 97 per cent have now returned to work and the remainder are completing their isolation."

He added: "The stringent control and mitigation measures in place, which are also being verified by the HSE, HSA and the Department of Agriculture, will be maintained in the weeks and months ahead, with no room for complacency. Vigilance is the priority as general restrictions are lifted across the economy."

4.3 Dietary Health

The aforementioned EU Farm to Fork policy has advancing dietary health as an overarching consideration, including referencing excessive red meat consumption:

> *"Overall, European diets are not in line with national dietary recommendations, and the 'food environment' does not ensure that the healthy option is always the easiest one. If European diets were in line with dietary recommendations, the environmental footprint of food systems would be significantly reduced"*

and the promotion of sustainable food consumption and facilitating the shift to healthy, sustainable diets:

> *"Current food consumption patterns are unsustainable from both health and environmental points of view. While in the EU, average intakes of energy, red meat, sugars, salt and fats continue to exceed recommendations, consumption of whole-grain cereals, fruit and vegetables, legumes and nuts is insufficient".*

4.4 Animal Health

Within the last two years there have been two Guardian reports on the treatment of Irish exported calves in France.

The first was in May 2019: https://www.theguardian.com/environment/2019/may/07/secret-footage-live-exports-calves-brutality

The second in April 2020: https://www.theguardian.com/environment/2020/apr/02/secret-footage-shows-calves-from-ireland-beaten-and-kicked-in-france

This needs to be addressed, and is becoming an increasingly important issue with the public.

Environmental Sustainability Committee Report to the 2030 AgriFood Strategy Group, ESC Monitoring

Environmental Sustainability Committee Report to the 2030 Agri-Food Strategy Group
ESC Environmental Monitoring

Background:

The Environmental Sustainability Committee was established as a sub-group of the HLIC following a recommendation in the Food Wise Strategy and accompanying Environmental Assessment Report. The Committee's role includes the evaluation and assessment of the delivery of environmental sustainability and mitigation actions set out in the Food Wise strategy report and Implementation Plan. The Committee also consults with relevant stakeholders on specific issues related to the sustainable development of the Irish agri-food sector and the sector's interaction with the environment.

The Committee held its first meeting in January 2016 and since then has held quarterly meetings at which a wide range of environmental issues concerning the implementation of the Food Wise strategy have been considered. In particular, the Committee focussed on those sustainability actions that were seen to be a priority.

Committee overview:

***Food Wise Sustainability actions*:**
The focus of Food Wise 2025 was to build on Food Harvest 2020, which focused on smart green growth to add value to Irish agricultural exports. While it was anticipated that this was likely to mean some increase in dairy numbers, the expectation was that there would not be a significant increase in overall national herd.

The Food Wise vision for the future of the agri-food sector recognised the critical importance of environmental sustainability and included eight overarching sustainability recommendations with over 80 individual environmental actions. At the outset, the Environmental Sustainability Committee identified 26 priority actions within the sustainability chapter.

As at Q4 2019 27% of these actions are reported as target achieved; 42% have substantial action undertaken and ongoing and 31% action has commenced and is progressing. However, it should be noted that for those actions reported as having made substantial action and commenced and progressing all but two are ongoing/annual actions so are unlikely to ever be recorded as having been achieved.

A similar pattern arises overall for all actions in the sustainability chapter with 88% reported as target achieved/substantial action undertaken and ongoing. The remaining actions are all either ongoing or annual actions.

Overall the Committee acknowledges the positive environmental actions that have taken place since the introduction of the Food Wise Strategy such as:

- Pilot Farm Hazardous Waste Collection Scheme
- Code of Good Practice for Reducing Ammonia Emissions from Agriculture

- Voluntary Nitrates Derogation Review
- DAFM Water Network
- Agricultural Sustainability Support and Advisory Programme (ASSAP)
- Profiling energy use within the agriculture sector
- Establishment of an Inventory Refinement Group: to ensure standardisation and use of common data in the inventories for the agriculture and land use sector.
- A high-level Bioeconomy Implementation Group - jointly chaired by the Departments of Agriculture, Food and the Marine and Communications, Climate Action and Environment
- Publication of the Agriculture, Forest and Seafood Climate Change Sectoral Adaptation Plan
- European Innovation Partnerships projects focusing on themes such as: the preservation of agricultural landscapes; water quality; resource efficiency; climate mitigation/adaptation and biodiversity
- Workshops including the Grassland Symposium which showcased the extent of research on topics such as: soil quality, nutrient measurement, grasses and grass mixes for a range of farming intensities from extensive HNV to intensive derogation farms; the Cross-sectoral Seminar on Climate Change Adaptation in the Agriculture, Forest and Seafood sector and the 2018 Environmental Sustainability Dialogue from which emerged the need for a coherent, clearly articulated, whole system response setting out what is expected of industry right through to individual farmers, from which the term "Climate Wise" emerged.
- Following on from the above and consultation with the HLIC a public consultation on a draft climate and air roadmap for the agriculture sector called AgClimatise took place in November 2019.
- Research projects such as LANDMARK Project and scheme evaluations including BDGP and GLAS.

Recommendations for development of future Agri-Food Strategy:

Prior to making its recommendations the Committee has reviewed some key agri-environmental indicators and how the projections upon which FoodWise was developed, including the 'Sustainable Growth Scenario' developed by Teagasc, and recommendations made, faired out to-date.

Growth Trends

The Sustainable Growth Scenario projections foresaw the dairy sector growing and specialist beef cow numbers contracting.

The table below includes the FH scenario and FW scenario showing the projection for 2020 and the actual position in 2019. (FH is included as the base line assessment as FW built on the FH targets. In addition, 2020 is the FW mid-point metric.)

Indicator	**FH Projection - 2020**[i]	**FW interim Projection**[ii] **- 2020**	**Actual - 2019**
GHG emissions	18.9mt CO_2eq	20.64mt CO_2eq	*20.633 Mt CO_2eq

Total Cattle**	6.383m	7.004m	7.209m
Dairy cow	1.395 m	1.364m	1.465m
Beef Cow numbers	0.951	1.017m	0.978m
Fertilizer	345,558 tonnes of N	401,146 tonnes of N	367,364 tonnes of N
Milk output	7.95 bn kg	8.27 bn kg	8bn kg

* 2018 figure (EPA figure published April 2020). EPA (WAM) project a further 3% increase on 2018 agriculture emission levels by 2030 (projections published June 2019).
** June figure

- A comparison between cattle numbers in 2010 and the actual position in 2019 shows:
  - total cattle numbers saw an increase of 10%
  - the increase in dairy cows was almost 41%
  - suckler numbers decreased by approximately 12%.
- The milk output projection was based on a 50:50 split between additional cows and additional milk per cow. However, the reality of the apportionment of National milk output growth between yield and cow numbers was not as anticipated. In 2019 the output achieved was 70% from additional cows and 30% from increased yield per cow.
- On dairy farms in 2017, the most profitable, most intensive farms had the lowest emissions intensity (GHG per output) but higher absolute emissions as they have higher animal numbers and produce more.[iii]

Other key environmental indicators are considered below:

Water
Water Quality in Ireland Report 2013-2018 • Overall there has been a net decline in water quality since 2013. • Agriculture is the most frequent significant pressure in water bodies that are not meeting their Water Framework Directive targets • Continuing loss in our high-status water bodies whose numbers have fallen by a third since 2009 • Since 2013 nitrogen emissions to water have increased as both cattle numbers and fertilizer use have increased. Nitrogen emissions to water are a particular concern in the south and southeast of the country.

Birds
National Biodiversity Action Plan 2017-2021 • 24% of the breeding bird taxa in Ireland are stable, 27% are decreasing and status of the final 11% is unknown. • For wintering bird taxa, just one-quarter are increasing in terms of population trends with similar values in those in decline and fluctuating. • 37 bird species are on the "Birds of Conservation Concern in Ireland Red List" based on a 2013 assessment of 185 frequently occurring birds in Ireland. • Since the last report in 2007 this has increased by 12 species and a small increase

was recorded for species on the "Amber List".

Country bird survey on 51 bird species (1998 -2016)

- 47% of species are increasing
- 27% of species are stable
- 26% of species are in decline

Ammonia

- 99% of ammonia emissions arise from agricultural activities
- Ireland exceeded the ammonia emission ceiling in 2016, 2017 and 2018 and will continue to do so, albeit significant action being taken in areas such as low emissions slurry spreading technology.
- Dairy cow numbers and nitrogen fertiliser use over the period 2012 to 2018 were the most significant drivers of increased ammonia emissions.

Clean Air

In terms of agriculture the main challenges arising are ammonia issues, odour and scrub/upland burning.

The Committee noted that the sector is responding and is engaging with solution focussed measures such as low emission slurry spreading techniques (LESS), slurry storage improvements and increased conditionality for ammonia abatement integrated in the implementation of our Nitrates derogation. For example the Department has supported over 4,500 farmers in GLAS under the LESS action and 2697 LESS attachments have been fully grant aided by TAMS .

Conclusion:

The Committee:

- is concerned with current trends which show GHGs, water quality, air pollutants and biodiversity indicators are moving in the wrong direction.
- recognises the impact of recent agricultural growth is becoming more spatially disaggregated with pressures from both extensification and intensification. Many of the principal concerns are driven by intensification by specific sectors of agriculture.
- notes that ammonia poses a particular challenge as emissions from the sector are above the limits set in the National Emissions Ceilings Directive.
- consider that agri-food industry is failing to take sufficient responsibility for managing these impacts.

The value of agriculture to Ireland and the regional variation in farming must also be considered with policy focussing on developing the right measures in the right area. It is also acknowledged that capacity to reduce emissions (GHG and ammonia) is limited and ongoing close monitoring is required as part of the next Plan.

Key recommendations:

1. As stated above, while it was anticipated that FW was likely to result in some increase in dairy numbers, the expectation was that there would not be a significant increase in overall national herd. We can see that the reality of what happened differed to the projected, with approx 200,000 head extra in national herd primarily driven by approx 100,000 dairy cows and their offspring. Therefore, the Committee's overriding recommendation is that any future strategy should include flexibility to allow for an annual stock-take/analysis to allow updating of recommendations and actions to reflect the position as it develops.
2. The Committee recommends that the following two key reports should be taken into account when developing the 2030 food strategy:
    - CCAC Annual Review 2019 Special Focus on Agriculture, Forestry and Other Land Use;
      and the
    - IPCC special report on climate and land including the CCAC response to that report.

    In addition, other reports which should be reviewed include:
    - EPA Inventory and Projections Reports
    - The 2019 All of Government Climate Action Plan
    - EPA Water Quality Report 2013 – 2018
    - European Court of Auditors Report on Biodiversity in Ireland 2020

3. Environmental sustainability addresses GHG, clean air, water and biodiversity, which cannot be taken in isolation as they are all interdependent. The 2030 Strategy should consider including a tighter set of environmental KPIs that are SMART (specific, measurable, actionable, realistic, and time-bound), in line with Government policy and national, EU and International commitments.
4. Consider the socio-economic benefits of the agriculture sector particularly in rural areas therefore, the importance of a just transition for those impacted by changes in land use.
5. The bioeconomy offers opportunities and capacity for moving forward but there must be policy coherence to avoid impacts to the natural environment.
6. Industry to engage further and take a greater a role in helping reach climate and broader sustainability targets both in terms of reducing emissions but also being active in the development of a decarbonised energy sector and supporting farmers. Innovative solutions should look at the farm from a more complete perspective than farming itself.

[i] https://www.teagasc.ie/media/website/publications/2011/67_FoodHarvestEnvironment.pdf
[ii] FAPRI Baseline SGS excel document
[iii] https://www.teagasc.ie/media/website/publications/2019/2017-sustainability-report-250319.pdf