



**SEA/Draft Environmental Report for Agri-Food Strategy 2025
(Food Wise 2025)**

Supplementary Critique by An Taisce

28th August 2015

Context

This document provides additional commentary and critique from An Taisce in relation to the SEA/Draft Environmental Report for Agri-Food Strategy 2025 (Food Wise 2025), which is referred to in the text below as the “draft report”. This commentary should be read in conjunction with the An Taisce responses to the issued questionnaire, provided separately.

Summary

There are major deficiencies in the draft report, specifically in its treatment of GHG emissions and of potential impacts on water quality. A complete revision is required, to address the following fundamental deficiencies:

- Scenarios considered are poorly defined and confusing
- Selective construction of scenarios to exclude lower livestock options predetermines findings in favour of Agri-Food Strategy 2025.
- Exclusion of the do-nothing scenario is a serious and unjustified omission.
- No discussion or analysis of fundamental change in suckler/beef policy.
- Adoption of a simplistic scale of impacts which understates negative impacts.
- Deficient methodology and unsupported conclusions - no quantification of impacts in terms of GHG emissions.
- Lack of clarity on GHG mitigation measures.
- Valid concerns and arguments previously submitted by An Taisce with respect to the need to reduce GHG emissions and concerns on sustainability [5] were ignored entirely.
- Failure to address impact on world food supplies.
- Failure to substantively address potential impacts on water quality.

Overall, the draft report is unconvincing, inappropriately promotional, and quite difficult to follow even within its own framework. It is not in the national interest nor in the farm organisations’ interests to have such a major agricultural policy plan based on such a flawed environmental assessment.

1. Problems with Scenario Selection

It would have been helpful to have referred to the scenario definitions used in the previous environmental assessment of Food Harvest 2020 (FH2020) [1], and to explain how the three new scenarios in the draft report relate to, or differ from those in FH2020. In the assessment of FH2020, scenarios A to D were clearly defined in terms of livestock numbers, characteristics, feeding and land requirements. In the present draft report only brief qualitative descriptions are given. The three scenarios, Base, Base+ and (so-called) Sustainable Growth, as described on pages 50-51, all involve growth in production volume. Base and Base+ would appear to be similar to FH 2020 scenarios, as stated on page 58: "These scenarios represent changes on expectations 'in the pipeline' from *Food Harvest 2020*." Base+ is a technologically enhanced version of Base. As the Sustainable Growth scenario has been *defined* by the authors to include additional mitigation measures beyond those in Base+ it is inevitably assessed as having the lowest GHG impact. It should also be noted that naming a scenario as "Sustainable Growth" introduces an obvious risk of bias in the assessment. A significant weakness in the draft report is that there has been no exploration of additional scenarios which could also ensure a profitable future for agriculture, such as for example a move away from unprofitable beef production. Nor has a do-nothing scenario been satisfactorily considered

In the environmental assessment of FH2020, Scenario D (High Technology), was assessed as having the lowest GHG impact. Notably scenario D had lower livestock numbers and lower land requirements than the other three scenarios. To provide continuity of analysis it would have been useful and informative to have included Scenario D in the draft report. It would appear that it may well have out-performed the Sustainable Growth scenario.

2. Exclusion of Do-Nothing Scenario

It is common practice in environmental assessments to consider a do-minimum or do-nothing scenario. This represents the situation that is likely to evolve were the programme or plan not in existence. In the case of Irish agriculture "do-nothing" represents the entirely reasonable scenario of "agricultural industry taking [its] own course in light of industry drivers" as stated on page 51 of the draft report. There is considerable confusion in the draft report with respect to this aspect. On the same page (p. 51) the following contradictory statements appear:

"While, not considered an alternative strategy, in the interest of completeness the do nothing scenario was also assessed."

"However, it is not assessed here as the Do nothing scenario is not considered a realistic alternative to Agri-Food Strategy 2025."

But on page 58 the draft report states:

"In addition, the Do Nothing scenario has been examined in order to examine the evolution of agriculture in the absence of the plan and highlight the benefits of the preferred scenario."

From this point on however in the draft report Do-Nothing disappears, and is not included in the assessment of alternative strategies on page 84, nor in Table 4.2 on page 86. It re-appears in different clothing however on page 84 with the statement:

"The Base Case Scenario, is considered to be a continuation of existing policy and can be likened to a do nothing scenario. Under this scenario developments within the agri-food sector would continue on their current path ..."

Were “do-nothing” to have been included it is quite likely that it would have resulted in the best outcome with respect to GHG emissions. Donnellan and Hanrahan (2011) considered the impact of no new policy following abolition of the milk quota [2]. Under this scenario they concluded that Irish agricultural sector income would still be 21% higher in 2020 than during the base period 2007-2009 and that GHG emissions from agriculture would reduce by 10% relative to 2005, to a level of approximately 16.8 MtCO_{2eq}. The projected reduction in GHG was due to reduction in the suckler beef herd due to market forces. The revision of the draft report should include such a market-driven do-nothing scenario.

3. No Discussion of Fundamental Change in Suckler Beef Policy

In previous analysis of the impacts of FH 2020 [1], it was assumed that there would be a significant decline in the beef suckler herd, due to economic forces, as beef production would need to rely heavily on continued direct payment subsidies. This suckler herd reduction would have off-set the projected increase in emissions from the dairy herd, as stated in the FH2020 assessment:

“However, the projected increase in dairy emissions is offset by the projected contraction in the size of the suckler cow herd”

(FH2020 environmental report p.42) [1]

But Food Wise 2025 now envisages that the suckler herd will be at least maintained to ensure a supply of high quality beef which can command a premium price. The draft SEA report fails to quantify the changes in GHG emission following this fundamental change in suckler/beef policy. This is a significant omission. **We calculate from a simple model that the 30% increase in dairy herd mentioned in the draft report may increase GHG emissions by about 1.4 MtCO_{2eq} (enteric CH₄ + total manure CH₄ and N₂O).** In the Base scenario, this would possibly have been off-set by reductions in the suckler herd. But in the “Sustainable Growth” scenario, it is an additional emission, and should have been described as a significant adverse impact. It should be noted that this additional emission would completely negate the sum of all the GHG mitigation measures mentioned in the Teagasc MACC analysis [3].

4. Scale of GHG Impacts

The draft report adopts the same significance criteria as used in the environmental assessment of FH 2020. This is a simple scale which rates the significance of impacts in terms of the percentage change in GHG emissions. Consequently the impact scale takes no account of the need to progressively reduce GHG emissions, nor of the negative environmental effects of maintaining a constant elevated level of GHG emissions. Characterising no perceptible change in GHG emissions as a neutral impact is incorrect. **In the context of climate change a flat-lining of GHG emissions at the current elevated levels could be validly described as a serious negative impact.** Also, when considering changes in GHG emissions, it is essential to specify the reference emissions level, i.e. change relative to what? In the environmental report for FH 2020 the baseline period was defined as 2007-2009. But nowhere in the draft SEA report is the reference emission level specified.

5. Deficient GHG Mitigation Assessment Methodology

The Strategic Environmental Objective (SEO) with respect to climate change in the draft report was to control and reduce GHG emission (p. 18), and the stated SEO target was to meet the requirements of the National Mitigation Plan (NMP). However the NMP has not yet been formulated, and the government background document on the NMP has been strongly contested by environmental stakeholders. It is therefore invalid to include it as a SEO target. Even when the NMP is eventually finalised, the authors of the draft report would need to critically evaluate any stated government targets and justify their inclusion or exclusion from the SEA. Otherwise the SEA would be based entirely on a government policy being assessed against stated government criteria, and would not conform to the standards of independent assessment required for SEA. As stated in its submission on the NMP background document [4], An Taisce is of the view that the National Policy Position (NPP), which informs the development of the NMP, is wholly inadequate, and that the NMP **must set out a carbon-budgeted pathway to a net-zero carbon future for the Irish economy by very soon after 2050**. The concept of “carbon neutrality in the agriculture and land-use sector, including forestry, which does not compromise capacity for sustainable food production”, as set out in the NPP is open to a wide range of interpretations and could not form an objective basis for a SEA.

On page 85 of the draft report, before any results of the analyses are presented, one is met with the sweeping statement:

“Overall, the assessment has identified that the implementation of the draft Agri-Food Strategy 2025 as proposed is likely to have positive effects on the majority of the SEOs.”

The impact assessment on page 86 is presented without any explanation, with Base and Base+ having moderate negative impact on GHG and Sustainable Growth having a Neutral/Imperceptible impact. It is impossible to assess the validity of this assessment in the absence of quantitative data on GHG emissions. To add to this confusion on page 88 it is stated that:

“Actions within the draft Agri-Food Strategy 2025 in connection with policy development and recognition of agriculture’s role in formulating energy policy have the potential to be significantly positive in relation to GHG emissions and moderately positive in relation to climate change.”

But Table 4.2 says that impact of the Sustainable Growth scenario (i.e. Agri-Food Strategy 2025) on GHG emissions is “imperceptible/neutral” (emphasis ours).

The draft report refers to the view that Ireland should be entitled to continue to emit elevated levels of agricultural GHG on the basis that it is more carbon efficient, but that current accounting procedures fail to acknowledge this:

“Although a strong case can be made that Irish agriculture is the most carbon-efficient [sic] in the EU, the current regulatory framework seeks to limit agricultural GHG emissions” (p. 21, 88).

This statement is fundamentally misleading. What matters for our compliance with EU reduction targets are our actual total GHG emissions (assessed cumulatively in the case of long lived gases, specifically CO₂). A brief perusal of emissions data for the EU-28 shows that in terms of activity related emissions, or indeed GHG intensity, Ireland is not the most GHG-efficient ruminant food producer in the EU. We can only speculate that the report is referring to the possibility of accounting carbon sequestration (on farmland only?) as an

offset against emissions, or perhaps to life-cycle analysis emissions. However no specific reference to any independent scientific study is presented in the report in support of such a view.

An Taisce is not aware of any definitive scientific evidence that current direct emissions of agricultural GHGs from livestock can be indefinitely offset by net current carbon sinks on the same farmland. Furthermore we are not aware of any scientific evidence that intensification of production within the current grazing model would increase the carbon sink capacity of farmlands, nor would we consider it at all *prima facie* plausible that such would be the case.

The SEA displays no understanding of the fact that Ireland's ruminant-based agriculture is producing GHG intensive food with a high absolute footprint compared to non-ruminant derived food. In relation to restricting global warming to a maximum of +2°C in line with science and equity, as per Ireland's UNFCCC declared commitment, the current course of increasing global ruminant numbers and food is completely inconsistent and incompatible.

If Ireland's ruminant production is indeed more efficient than in other countries then the only legitimate way to exploit this (consistent with effective global mitigation) would be for Ireland to participate in a defined international mechanism to collectively realise this efficiency by enabling certified reductions in livestock emissions elsewhere. Otherwise, the supposed efficiency is not enabling overall GHG mitigation (absolute emissions reduction): indeed total (global) emissions will still necessarily grow (rather than shrink rapidly, as required to re-stabilise climate). A credible SEA assessment of climate change impact has to recognise these global and long-term realities. The draft document fails to acknowledge any of this crucial context so it cannot fairly assess climate change impacts.

An Taisce has in a previous submission pointed out the fallacy of the LCA justification for Ireland unilaterally deciding to maintain elevated agricultural emissions [5]. If the revised SEA report wishes to address these aspects, it should include a full discussion, with references to the relevant studies.

On page 56 there is a selective presentation of data from an EPA report [6] which understates the seriousness of existing national GHG emissions. The draft SEA report points out that under the best case scenario Ireland is likely to cumulatively meet its limits for the period 2013-2020. However the draft report fails to include the important EPA qualification that the (currently rising) GHG emissions trajectory means that:

"Ireland is not on track towards decarbonising the economy in the long term in line with the Climate Action and Low Carbon Development Bill 2015 and will face steep challenges post-2020 unless further policies and measures are put in place over and above those envisaged between now and 2020." [6]

The only way Ireland could get on track to effectively decarbonising the economy is if immediate and sustained cuts are made in national emissions. There is no articulated rationale in the draft report (or elsewhere, as far as we are aware) for any one sector (agriculture) or any one set of commercial interests (the agri-food industry) to be preferentially excused from this national effort.

6. Lack of Clarity on GHG Mitigation Measures

Throughout the draft report one is left in the dark as to the specific GHG mitigation measures and actions and their quantified benefits. On page 92 where the cumulative effects with respect to Ireland's GHG commitments are supposed to be discussed, there is the unsupported statement:

"In so far as Agri-Food Strategy 2025 promotes the concept of sustainability and promotes research directed at limiting GHG emissions the strategy will have positive impacts."

This assumes that the unspecified promotion measures and research will be *effective*, without any independent evidence to support this. This is verging on so-called "magical thinking", and has no place in a professional assessment.

On page 93 under the heading of Transboundary Effects, it is likewise stated, without any supporting analysis that "The draft Agri-Food Strategy 2025 suggests measures for limiting GHG emissions and ammonia. Therefore no consequent transboundary effect is predicted as a result of Agri-Food Strategy 2025." Maintaining elevated agricultural GHG emissions has an obvious transboundary effect. The statement quoted is simply absurd.

Table 6.1 on p. 95 lists mitigation measures. One of these is the rather circular statement:

"Ensure that mitigation measures are developed for sectors covered by the plan ..."

The specific mitigation measures listed are: Origin Green, research and development, carbon sequestration, promotion of the carbon navigator tool, knowledge exchange, breeding/genetics, grassland and soil management.

Origin Green is an initiative by Bord Bia aimed at the food processing companies to demonstrate compliance with sustainability standards. However, it is primarily a marketing tool, and it is unknown what impact its raw material sourcing standards will have at farm level in terms of activity emissions. The impact of the listed mitigation measures in terms of potential GHG reduction is not specified, and it is therefore not clear if the combined mitigation benefit would be the 1.1 MtCO₂eq mentioned in the Teagasc MACC analysis [3], and in the DAFM mitigation discussion document [7], or if further reductions can be achieved. The revised report should describe the mitigation measures in more detail and provide estimates of likely benefits in terms of GHG reduction.

An Taisce has previously made a submission including a detailed critique of the DAFM GHG mitigation approach, pointing out the fundamental inadequacy in the approach to mitigation [5]. **An Taisce's principal concern is that any plan for GHG mitigation by the agricultural sector must actually and measurably contribute to the immediate, substantial and sustained reductions needed in Ireland's total emissions.** Neither in the DAFM (2015) mitigation discussion document, nor in the present draft report does cutting agricultural emissions feature as a national objective.

7. Risks to World Food Security

A major putative justification for pursuit of an expansionary food policy is food production to feed a growing world population. It would have been helpful to have considered the net food energy export status of Ireland. As submitted by An Taisce in response to the agricultural mitigation discussion document, **both Ireland and the EU are currently net importers of food energy** [5].

In Ireland's case the net food energy imports are caused mainly by our heavy reliance on imported cereals, destined primarily for livestock feed. An Taisce requested that a full analysis of the net food energy exports should be incorporated in analysis of agricultural policy. It is disappointing that the draft report fails to address this aspect.

The crucial question is whether current policies will improve the situation with respect to Irish food energy imports, or further exacerbate the present imbalance. If the Agri-Food Strategy 2025 results in significantly increased importation of animal feed, the overall impact would be to reduce the availability of food energy worldwide. This aspect should be thoroughly assessed in the revised report.

8. Potential Water Quality Impacts

One of the biggest issues surrounding dairy farming and its intensification is the seemingly inevitable negative impact it will have on the aquatic environment. According to the Sustainable Water Network (SWAN) agriculture is one of the main sources of water pollution in Ireland. Two thirds of Ireland's land is in agricultural use. Certain agricultural practices result in water pollution due to the run-off of fertilisers, slurry, silt, chemicals and pathogens from the land into rivers, streams and bays, which in turn leads to a reduction in water quality and in the health of the water environment. Eutrophication caused both by contamination of water with animal slurry, which has a high level of nutrients and by inorganic nitrate and phosphate fertilisers is responsible of much of the moderate water pollution in Ireland. According to the Environmental Protection Agency (EPA), "Eutrophication of rivers and lakes due to phosphorous losses from agriculture continues to be the most critical impact of Irish agriculture on water quality" and over 70% of phosphates reaching inland waters emanates from agricultural sources. The EPA also state in the report on biological water quality (for the 2007-2009 period) that agricultural pollution was responsible for 39% of moderate pollution and attributes this to "diffuse losses including farmyard losses, siltation due to bank erosion and cattle access to streams, phosphorus loss from riparian areas and nitrate losses from tillage land."

Historically agricultural intensification and land reclamation has driven the loss of many riparian and coastal wetlands. Agriculture has been a leading driver of aquatic biodiversity loss, a process which is continuing to this day. **Given their rich soils it is likely that some of the land required for expansion under Food Harvest 2020/Food Wise 2025 will come from reclaimed wetlands.**

In many of the intensive dairy areas in the country the aquatic environment and its associated biodiversity are struggling to absorb the deleterious effects of modern dairy farming. This is of great concern to An Taisce as the pressure from agriculture on the aquatic environment will only increase in the coming years as intensification proceeds.

The EPA have already highlighted that Food Harvest 2020 is a "significant threat" to water quality and the 2013 South East Integrated Water Quality Report states that "The proposed expansion of the agriculture sector, as detailed in Food Harvest 2020 ... will bring large increases in farm outputs ... and the threat of additional diffuse environmental pressures

needs to be addressed". There is nothing in the draft report to indicate that these concerns have been satisfactorily addressed or mitigated against in Food Wise 2025.

According to a recent analysis of the situation by the EPA, Ireland faces enormous challenges to bring water bodies to the "good status" required under the Water Framework Directive and to prevent further deterioration of quality. Agriculture will have a "large influence" on Ireland's success in meeting water quality targets:

"Expanding production capacity may be a challenge for the agri-food processing companies operating existing licensed sites over which the agency has a role in licensing and enforcement."

"The location of some existing processing sites could reach a limit where the assimilative capacity of receiving water is at or near capacity".

"Intensification and expansion will increase the use of fertilising nutrients. It is therefore essential that the loss of nutrients to water is minimised."

Much of the increase in nitrogen generation will be in Limerick, Cork, Tipperary and Waterford, it adds. There is already a "significant problem" and expansion of the national dairy herd could "compound this issue".

According to the EPAs Water Quality in Ireland Report 2010-2012, 47% of rivers, 58% of lakes and 55% of transitional water were not of good status for the period 2010-2012. The two most important suspected causes of pollution in rivers are agriculture and municipal sources, accounting for 53% and 34% of cases respectively. There was for example also a 5% reduction in satisfactory quality lakes (10 lakes) compared to 2007-2009. While projects associated with the Agricultural Catchments Programme and the measures associated with the Nitrates Directive have reduced the levels of eutrophication associated with agriculture in many catchments it is unlikely that water quality will not deteriorate if intensification of bovine related agriculture continues without rigorous mitigation measures.

One of the most concerning trends in the recent EPA data is the continued loss of high status sites around the country. Only 11.5% Rivers, 9% Lakes and 3.6% Transitional Waters were considered to be of high status for the 2010-2012 period. Ireland has a legal requirement under the Water Framework Directive to prevent the loss of high status sites. These high status sites are also the last remaining refuges for protected aquatic species such as the Atlantic Salmon (*Salmo Salar*), Freshwater pearl mussel (*Margaritifera margaritifera*) and the European Otter (*Lutra lutra*). Atlantic Salmon are protected in the freshwater environment under Annex II and Annex V of the European Habitats directive (EU Directive 92/43) while the otter is protected under Annex II and Annex IV.

Any failure of the Irish government to fully consider the implications of Food Wise 2025 may lead to legal action and it is worth noting the situation in the UK where WWF UK, the Angling Trust and Fish Legal have been granted permission by the UK high court to pursue their challenge to protect rivers, lakes and coastal areas from further damage. They are seeking a judicial review, arguing that the Department for Environment, Food and Rural Affairs and the Environment Agency are failing in their legal duty to take the necessary action to tackle the problem of agricultural run-off.

According to SWAN the current legislative framework is inadequate to address the wide range of agriculture-derived pressures on water in a number of ways:

1. There are legislative gaps where there are no specific regulations in place to control certain activities e.g. animal access.
2. Where regulations are in place, the provisions may not be strict enough to provide the required protection e.g. the Good Agricultural Practice (GAP) Regulations.
3. The implementation and enforcement of legislation is inadequate to ensure compliance.

The government's ongoing failure to address water pollution originating from Agriculture has contributed to our failure to meet our obligations under the Water Framework Directive by 2015. If we are going to prevent a further deterioration in water quality over the coming years then the impacts of dairy expansion on water quality will have to be addressed.

References

- [1] Philip Farrelly and Co (2014). Food Harvest 2020 Environmental Analysis Report. <http://tinyurl.com/pztaq7u>
- [2] Donnellan and Hanrahan (2011) Greenhouse Gas Emissions by Irish Agriculture: Consequences arising from the Food Harvest Targets, Briefing Note No. 2011/1 <http://tinyurl.com/pmcq9a9>
- [3] Schulte and Donnellan (eds). (2012) A Marginal Abatement Cost Curve for Irish Agriculture. <http://tinyurl.com/qyydpwf>
- [4] An Taisce (2015) An Taisce's Response to the Public Consultation on the Development of the National Mitigation Plan (NMP) <http://tinyurl.com/npnaaac>
- [5] An Taisce (2015) An Taisce's Response to Discussion Document on GHG Mitigation within Agriculture and Forestry Sector <http://tinyurl.com/pj54lv8>
- [6] EPA (2015) Ireland's Greenhouse Gas Emissions Projections 2014-2035. Wexford: Environmental Protection Agency. <http://tinyurl.com/ozerrh94>
- [7] DAFM (2015) A discussion document on the potential for Greenhouse Gas (GHG) mitigation within the Agriculture and Forestry sector. <http://tinyurl.com/pwupn11>