



FOOD WISE 2025

Strategic Environmental Assessment
SEA Statement

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Strategic Environmental Assessment **SEA Statement**

Prepared on behalf of

The Department of Agriculture, Food and the Marine

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November 2015

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1 Introduction

This Strategic Environmental Assessment (SEA) Statement has been prepared as part of the SEA of *Food Wise 2025* in accordance with national and EU legislation.

Food Wise 2025 has been prepared by a committee of key representatives of the Irish agri-food industry at the invitation of the Minister for Agriculture, Food and the Marine. On 1st July 2015 the Government noted the draft *Food Wise 2025* Report and the draft was published and opened to an eight week period of public consultation by the Minister for Agriculture, Food and the Marine of the Final Report, along with its associated draft SEA Environmental Report.

The period of consultation ended on 28th August 2015. The submissions received have been carefully considered and have informed the final SEA Environmental Report.

The Minister has appointed a High Level Implementation Committee (HLIC) to monitor progress and deliver on the ambition that the industry has set out in *Food Wise 2025*. In this regard, the draft *Food Wise 2025* report has been expanded by the addition of an Implementation chapter which captures in particular the environmental recommendations in the draft *Food Wise 2025* report and the SEA Environmental Report.

This document provides information on the decision-making process and documents how environmental considerations, the views of consultees and the recommendations of the SEA Environmental Report and the assessment carried out under Article 6 of the Habitats Directive have been taken into account by, and influenced, *Food Wise 2025*. This SEA Statement has been prepared having regard to Article 8 (Decision Making) of the EU Directive 2001/42/EC on Strategic Environmental Assessment and in accordance with Schedule 2, Section 16(2) of the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations (S.I. No. 435 of 2004) as amended. Cognisance has also been taken of the Circular Letter PL 9/2013 from the Department of Environment, Community and Local Government (DECLG).

The structure of the SEA Statement is as follows:

1. Introduction
2. Summary of Key Facts
3. Summary of the SEA Process
4. Consultation
5. Key Issues Raised in the Submissions and how Consultations were taken into account
6. Influence of SEA during Preparation of *Food Wise 2025*
7. Preferred Scenario
8. Measures to Monitor Significant Environmental Effects of the Implementation of *Food Wise 2025*
9. Conclusion

2 Summary of Key Facts

Title of the Plan:	<i>Food Wise 2025</i>
Purpose of the Plan:	<i>Food Wise 2025</i> , the Report of the 2025 Agri Food Strategy Committee, sets out a cohesive, strategic plan for the development of agri-food sector over the next decade. The Committee has identified that opportunities will arise as a result of significant population growth and greater access to international markets. In addition, the Committee recognises that the increased pressure on global agricultural resources and the environment will offer potential further growth opportunity for the Irish agri-food, forestry and fisheries sector.
Competent Authority:	Department of Agriculture, Food and the Marine (DAFM)
Period covered:	The Plan is for the period to 2025.
Area of Plan:	The Plan is for agri-food and fisheries sector in the Republic of Ireland.
Nature/content of Plan:	<p>The long-term vision as set out in the Report is of '<i>Local Roots Global Reach</i>' based on the continued development of the sector where efficient and environmentally-friendly production delivers sustainable export growth on global markets.</p> <p>The Committee believes that achieving this vision will benefit primary producers, processors and the food manufacturing sector, as well as the wider economy.</p> <p>On the basis of available data and by taking the actions identified in the Report, the Committee has set the following growth projections, which it believes are achievable by 2025:</p> <ul style="list-style-type: none">▪ Increasing the value of agri-food exports by 85% to €19 billion.▪ Increasing value added in the agri-food, fisheries and wood products sector by 70% to in excess of €13 billion.▪ Increasing the value of Primary Production by 65% to almost €10 billion▪ The creation of an additional 23,000 direct jobs in the agri-food sector all along the supply chain from primary production to high valued added product development. <p>To achieve the projections set out above, <i>Food Wise 2025</i> identifies over 350 recommendations to achieve sustainable growth and these will require a concerted and coordinated approach by primary producers, industry, Departments and State agencies.</p>
Date draft <i>Food Wise 2025</i> published:	July 2015
Main contact:	Economics and Planning Division Department of Agriculture, Food and the Marine Agriculture House Kildare St Dublin 2

3 Summary of SEA Process

Food Wise 2025 has been subject to a process of Strategic Environmental Assessment (SEA), as required under the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations S.I. No 435 of 2004 as amended by S.I. No 200 of 2011. This has included the key steps described in the following sections.

3.1 Screening

This determined that implementing *Food Wise 2025* would provide a framework for future projects that may potentially result in significant environmental effects - and therefore an SEA would be required. Furthermore, comparable screening determined that *Food Wise 2025* could not be shown not to have potential negative effects on the conservation objectives of European Sites, and an Appropriate Assessment (AA) was therefore undertaken in parallel with the SEA (see separate Natura Impact Statement (NIS)). Both assessments are closely interlinked and the Integrated Biodiversity Impact Assessment Framework (IBIA) was therefore followed.

3.2 Scoping & Statutory Consultation

At the scoping stage the key environmental issues or potential for impacts were identified based on an appraisal of the following:

- Draft Food Wise 2025;
- Sectorial plans and other relevant plans;
- An assessment of likely environmental impacts based on an understanding of the baseline environment; and
- Consultation with the project stakeholders and, environmental authorities and others.

The scope of the SEA was assessed with regard to the environmental topics identified by the SEA directive and these are:

- Biodiversity;
- Population;
- Human Health,
- Fauna and Flora;
- Soil;
- Water;
- Climatic Factors;
- Material Assets;
- Cultural Heritage;
- Landscape; and
- Interrelationships

Under the terms of Article 13 (A) 4 of the Planning and Development Regulations 2001 (as inserted by Article 7 of S.I. No. 436 of 2004), the following authorities were notified and provided with a copy of the draft Scoping Report:

- Environmental Protection Agency (EPA);
- Department of Agriculture, Food and the Marine (DAFM);
- Department of the Environment, Community and Local Government (DECLG);
- Department of Communications, Energy and Natural Resources (DCENR); and

- Department of Arts, Heritage and the Gaeltacht (DAHG).

A SEA Scoping document was produced which identified the scope required to ensure that the SEA process considered all potential impacts on the receiving environment arising from the plan. This document was presented at an initial scoping workshop with invited stakeholders on 9 April 2015 and subsequently issued to the relevant statutory environmental authorities and other relevant stakeholders. (Details of the statutory environmental authorities are listed in Annex IV of the SEA Environmental Report).

Following receipt and review of comments and observations of the draft Scoping Document, all observations, comments and suggestions were carefully considered and the scoping report was modified accordingly.

3.3 Environmental Assessment & SEA Environmental Report

The preparation of a SEA Environmental Report on the likely significant effects on the environment of *Food Wise 2020* included consideration of:

- Baseline data relating to the current state of the environment;
- Links between the draft *Food Wise 2025* and other relevant strategies, policies, plans, programmes and environmental protection objectives;
- Key environmental problems affecting the agri-food and fisheries sectors;
- The likely significant effects of the draft *Food Wise 2025* on the environment (both positive and negative);
- Measures envisaged for the prevention, reduction and mitigation of any significant adverse effects;
- An outline of the reasons for selecting the alternatives chosen; and
- Monitoring measures to ensure that any unforeseen environmental effects will be identified, allowing for appropriate remedial action to be taken.

3.4 Habitats Directive Article 6(3) Assessment

The NIS assesses the potential for the *Food Wise 2025* to have adverse effects on the integrity of sites of European-scale ecological importance. The responsibility for carrying out the Assessment lies with DAFM and the NIS facilitates the AA by DAFM. DAFM's AA decision at the adoption of the Strategy will be published alongside the adopted Plan as it marks the conclusion of the AA process.

The preparation of *Food Wise 2025* has regard to Article 6 of the Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (hereafter referred to as the Habitats Directive). This is transposed in Ireland by the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. 477) (hereafter referred to as the Birds and Habitats Regulations) and Part XAB of the Planning and Development (Amendment) Act 2010. Since the Strategy is not covered by the Planning Acts it falls under the remit of the Birds and Habitats Regulations.

Article 6(2) of the Habitats Directive sets out the requirements of Member States, that within European sites, they maintain and restore those habitats and/or species that a site has been designated to favourable conservation status, and avoid damaging activities that could significantly disturb species or lead to deterioration of their habitats or habitat types.

Article 6(2): "*Member States shall take appropriate steps to avoid, in the special areas of conservation, the deterioration of natural habitats and the habitats of species as well as disturbance of the species for which the areas have been designated, in so far as such disturbance could be significant in relation to the objectives of this Directive*".

Articles 6(3) and 6(4) of the Habitats Directive set out the requirement for an assessment of proposed plans and projects likely to affect Natura 2000 sites (Annex 1.1).

Article 6(3) establishes the requirement to screen all plans and projects and to carry out a further assessment if required (Appropriate Assessment (AA)):

Article 6(3): *“Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to an appropriate assessment of its implications for the site in view of the site’s conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”*

The subsequent paragraph allows proposed plans and projects to be approved in certain conditions.

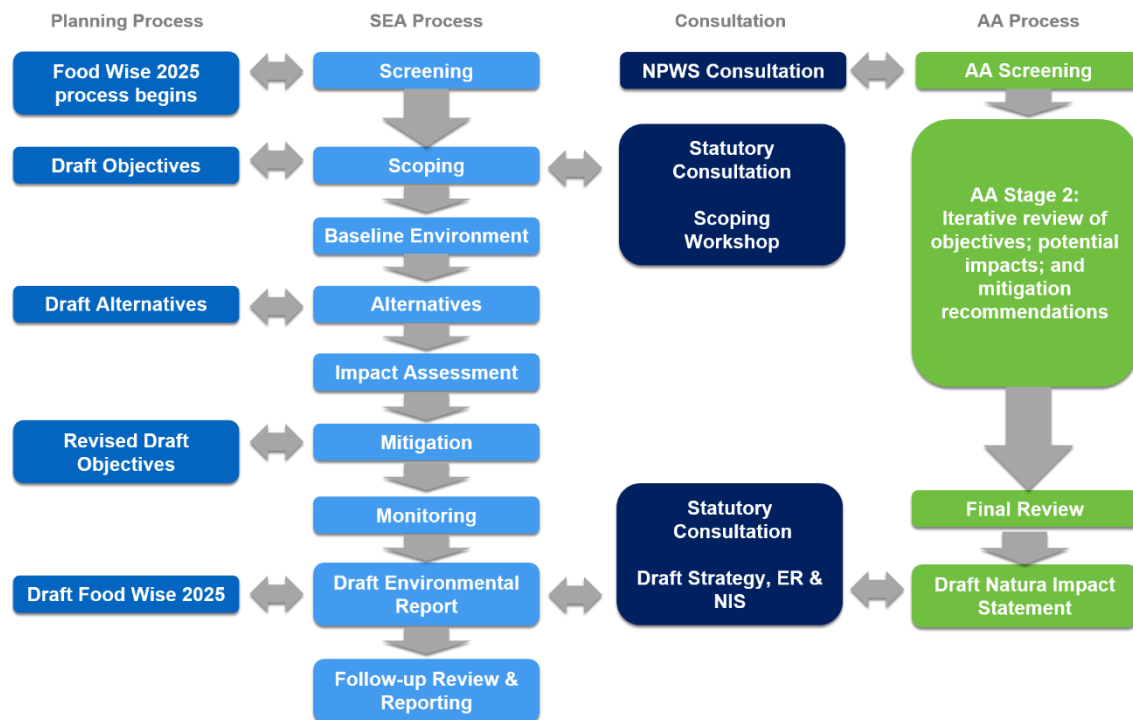
Article 6(4): *“If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of the Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species the only considerations which may be raised are those relating to human health or public safety, to the beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.”*

The NIS has informed the Appropriate Assessment process for *Food Wise 2025*.

Food Wise 2025 sets out the underlying trends and projections of how the sectors are expected to change in the period up to 2025. All strategies, such as *Food Wise 2025*, must be prepared and examined to ensure that there will not be any adverse effects on the integrity of sites that are designated for their special habitats and wildlife. These particular sites are regarded to be of European importance and are part of the European Commission’s Natura 2000 network of sites. They are termed candidate Special Areas of Conservation (SAC) under the E.C. Habitats Directive and Special Protection Areas (SPA) under the E.C. Birds Directive. The Irish Government has a legal obligation to protect these sites.

Both the SEA and AA assessments are closely interlinked - as demonstrated within the Integrated Biodiversity Impact Assessment Framework - IBIA (EPA, 2013), which was followed. (Refer to Figure 1-1).

Figure 3-1 Schematic diagram illustrating the interactions between the SEA, AA and drafting of Food Wise 2025



The process of assessing *Food Wise 2025* was a structured exercise with a series of steps. The overall purpose of the process was to ensure that *Food Wise 2025*, when implemented, does not result in adverse effects on the “integrity” of the European sites within the Natura 2000 network. The overall process is termed “*Appropriate Assessment*”.

The first step was to look at the overall *Food Wise 2025* strategy in principle and to answer the questions: is it likely that the implementation of this Strategy could result in likely significant effects on the European sites within the Natura 2000 network? It does not matter where these sites may be – impacts can occur across administrative boundaries. This step is known as “*Screening*” and is required by Part 5 Section 42(2) of the Bird and Habitats Regulations. The Screening Stage was carried out prior to the drafting of *Food Wise 2025*. A Screening Report and Determination has been published alongside *Food Wise 2025*.

If the screening stage results in a judgement that likely significant effect may occur or cannot be ruled out, then a more detailed AA is required. Whilst the structure of this assessment process is not specified in the legislation, there are guidance documents that are used to provide an indication of how this assessment may be carried out.

In order to ensure that *Food Wise 2025* complied fully with the requirements of Article 6 of the Habitats Directive and all relevant Irish transposing legislation, the AA consulting team, on behalf of DAFM carried out the screening of the Strategy in principle, to see if it required an AA. The Screening determination recorded this decision.

The outcome of this Screening Stage was that it was determined that due to the close relationship between the agriculture sector and the natural environment, that likely significant effects could not be ruled out and that *Food Wise 2025* would need further assessment. The process then proceeded to a full Appropriate Assessment.

An Appropriate Assessment involved analysing the relationship between the proposed elements of *Food Wise 2025* and the sensitivities of the European sites. Due to the national scale and strategic nature of *Food Wise 2025*, there were few examples whereby the projections and aspirations of each sector could be interpreted

into tangible impacts on the conservation objectives for European sites. However where there was the potential for an impact to occur, then the assessment team provided advice to avoid or mitigate the potential impact.

Best practice in mitigation follows a hierarchy i.e. avoidance of impacts by removing policies/objectives, followed by caveats/changes to policies/objectives to mitigate any likely significant impacts. The AA consulting team provided the Sectoral working groups with a Policy Guidance Note which advised them the cause-effect relationship between agriculture and ecological receptors and also noted the habitats and species that were vulnerable to the effects of agriculture.

DAFM provided the AA consulting team with draft text during their process of preparing *Food Wise 2025*. *Food Wise 2025* as a whole, as well as individual actions proposed within it were subjected to the assessment process. It was identified at several stages that some elements of *Food Wise 2025* could be more easily linked to potential impacts on European sites than others.

Food Wise 2025 and accompanying documentation was published for a period of public consultation for 8 weeks ending 28th August 2015. All submissions were scrutinised by the AA team and the DAFM was alerted as to any submissions that may have implications for European sites. The final NIS has addressed the submissions as far as reasonably possible within the overall scope and purpose of the Strategy and the AA process. Where changes to the NIS were made directly as a result of submissions received then this has been highlighted.

3.5 SEA Statement

The main purpose of this document is to provide information on the decision-making process for *Food Wise 2025* in order to illustrate how decisions were taken, making the process more transparent. In doing so, the SEA Statement documents how the recommendations of both the SEA Environmental Report and the Appropriate Assessment, as well as the views of the statutory consultees and other submissions received during consultation, have influenced the preparation of the final *Food Wise 2025* report. The SEA Statement also provides information on the arrangements put in place for monitoring and mitigation. The SEA Statement is available to the public, along with the SEA Environmental Report, the NIS and the final *Food Wise 2025* report.

In accordance with Article 16 of the European Communities Environmental Assessment of Certain Plans and Programmes Regulations, (S.I. No. 435 of 2004), as amended, the Competent Authority is required to prepare a statement summarising the following:

- a) *How environmental considerations have been integrated into the plan or programmes, or modification to a plan or programme;*
- b) *How (i) the environmental report, prepared pursuant to article 12, (ii) submissions and observations made to the planning authority in response to a notice under article 13 and (iii) any consultations under article 14, have been taken into account during the preparation of the plan or programme;*
- c) *The reasons for choosing the plan or programme, in light of other reasonable alternatives dealt with, and*
- d) *The measures decided upon to monitor, in accordance with article 17, the significant environmental effects of implementation of the plan or programme”.*

3.6 Approval of Food Wise 2025

The Minister for Agriculture, Food and the Marine brought the draft *Food Wise 2025* report to Government on 1st July 2015, and it was noted. Following an eight week period of consultation, the SEA Environmental Report was completed, and the recommendations have been taken into consideration in the additional Implementation Chapter that is included in the final *Food Wise 2025* report. This was published by DAFM in December 2015.

A copy of the final *Food Wise 2025*, as agreed by the HLIC is provided alongside this document.

4 Consultation

4.1 Introduction

In the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations (S.I. No 435 of 2004), consultation is specifically required at the scoping stage with the nominated environmental authorities, and then with the wider public when the SEA Environmental Report and the draft Plan are put on public display. This section describes the statutory and non-statutory consultation that has taken place over the course of the SEA process. The SEA Statement together with the final *Food Wise 2025*, as agreed by the HLIC are now available.

4.2 Consultation Process

Scoping was undertaken in March to May 2015 with formal statutory consultation on the draft scoping report running from 9th April to the 7th May 2015. At that stage the Strategy was referred to as the Agri-Food Strategy 2025. The objective of scoping was to identify key issues of concern that should be addressed in the environmental assessment of *Food Wise 2025* so that they could be considered in appropriate detail. In addition, a workshop was held on the 9th April 2015. The workshop was attended by:

- SEA and AA Team
- DAFM
- EPA
- Teagasc
- The Marine Institute
- Environmental Pillar
- Oxfam (Stop Climate Chaos)
- Members of the *Food Wise 2025* Committee
- Trocaire

On the 2nd July 2015 the draft Food Wise 2025 was published on DAFM's website for public consultation, alongside the SEA draft Environmental Report and the draft NIS. The deadline for receipt of submissions was the 28th August 2015.

In order to facilitate the consultation process the SEA team prepared a consultation questionnaire which sought to elicit comments on the principle aspects of the SEA Environmental Report. In a number of cases the responses to the consultation consisted of detailed replies to the questionnaire. In other cases the responses received were stand-alone documents. Some respondents completed the questionnaire and made additional submissions.

In response to the invitation to comment on the contents of Food Wise 2025 SEA draft Environmental Report and Draft NIS thirteen submissions were received from the following organisations:

- Department of Arts Heritage and the Gaeltacht
- Department of the Environment, Community and Local Government
- EPA
- An Taisce The National Trust for Ireland
- BirdWatch Ireland
- Environmental Pillar
- Inland Fisheries Ireland
- Hedge Laying Association of Ireland
- Irish Cooperative Organisation Society Ltd (ICOS)
- Oxfam Ireland
- RDS Committee of Agricultural & Rural Affairs
- Trocaire
- University College Dublin (2 submissions)

For the most part the submissions received raised issues addressed to the authors of Food Wise 2025 and in commentary on the SEA draft Environmental Report. A number of submissions were received after the closing date of the 28th August 2015, but were taken into account in any case.

All submissions which were addressed to the SEA draft Environmental Report or draft NIS were reviewed in detail by the SEA and AA team. Amendments have been made as a result to the SEA Environmental Report in response to issues raised in these submissions where deemed appropriate. A number of the submissions addressed issues which were outside the scope of the SEA and the preparation of *Food Wise 2025*. These submissions have been considered by DAFM.

5 Key Issues Raised in the Submissions and How Consultations were Taken into Account

5.1 Introduction

The draft *Food Wise 2025* and the accompanying SEA Environmental Report and the NIS were circulated to the statutory bodies and made available to the general public through DAFM's website on 2nd July 2015. The public consultation remained open until 28th August 2015.

A number of submissions raised issues which were outside the scope of the SEA and the preparation of *Food Wise 2025* all these submissions were forwarded to DAFM for their consideration.

For the purposes of analysis responses relevant to the SEA Environmental Report and NIS were grouped as follows:

- Water
- Emissions to air (including GHGs and ammonia)
- Biodiversity and flora & fauna
- General issues

5.2 Water

Issues raised during Consultation

- A large number of the responses received expressed concern about the protection of water quality and the key role of the agri-food industry plays in relation to water quality.
- The responses reflected concern for the protection of surface waters, groundwaters, transitional waters and estuarine waters. The influence of water quality on ecosystems and biodiversity was highlighted as was the importance of ground water resources to human health.
- A number of submissions called for more detail in relation to catchment level monitoring and potential impacts together with sector specific mitigation measures.
- Increased focus on Ireland's obligations under the Water Framework Directive was called for and the difficulty of meeting current obligations arising from present agricultural practices was highlighted.
- The inclusion of up to date mapping in the base line section was suggested.
- Some submissions highlighted the importance of phosphorus and sediments as pollutants and the monitoring of atmospheric depositions of ammonia was called for. The risk to fish and fisheries from diffuse and point source pollution was also noted.
- Many submissions referred to the risk of increased run off of phosphorus, nitrogen and sediments as a result of intensification at farm level.
- There was concern that any increase in farm herd numbers would lead to intensification in areas which are already farmed intensively and thus increase the pressure on both ground water and surface water.
- The risk of increased pollution from pesticides and of increased transport of sediments to water courses through more intensive tillage was also raised.
- The area of targeted research into run off patterns and linkages between agriculture and pollution was noted as was the 2012 EPA Report on water quality which highlights the fact that a significant proportion of actual pollution incidence arise from agricultural sources both point and diffuse.
- Trends towards increased uses of fertiliser associated with increased stock numbers, especially dairy stock were used to justify greater investment in catchment monitoring and catchment management plans.

Food Wise 2025 Response and Changes Made

- In response to concerns in relation to the protection of ground waters, surface waters and transitional and estuarine waters changes were made to the SEOs and to the recommendation for monitoring and mitigation in the SEA Environmental Report. These changes have been translated into recommendations within *Food Wise 2025*.
- In relation to catchment monitoring, recommendations for the resourcing and roll-out of catchment management and monitoring have been strengthened within the SEA Environmental Report and these have been translated into recommendations within *Food Wise 2025*.
- Obligations under The Water Framework Directive have been clarified within the SEA Environmental Report and this is reflected through the sustainability actions in *Food Wise 2025*.
- The SEA Environmental Report has been revised to include the most up to date mapping and data sets available in relation to water quality in Ireland.

- The potential for damage to water quality through migration of phosphorus or sediments through the drainage systems or directly as runoff from agricultural land has been given greater prominence in the SEA Environmental Report.
- The SEA Environmental Report recommends the DAFM cooperates with other relevant government agencies to develop a suitable ammonia monitoring methodology.
- The risks posed by intensification generally and in particular the risks of intensification in the dairy industry where dairy cow numbers are already high have been highlighted in the SEA Environmental Report.
- In addition it is recommended that specific catchment monitoring be undertaken in areas where large increases in dairy cow numbers occur. This has been translated into specific recommendations in *Food Wise 2025*.
- Concerns in relation to pesticides and increased risks to waters from intensification or changes in crop rotations in response to changes in demand for animal feeds are reflected in text changes within the SEA Environmental Report and specific recommendations within *Food Wise 2025*.
- The SEA Environmental Report contained an increased emphasis on targeted scientific research both in relation to cause and effect within agricultural practises and the need for new and tailored mitigation measures.
- The roles and responsibilities of agriculture in relation to the influence of farm practises as they affect the risk to water quality has been further highlighted through text changes in the base line section of the SEA Environmental Report. These concerns are fully recognised throughout *Food Wise 2025* and in particular in the implementation chapter.

5.3 Emissions to air (including GHGs and ammonia)

Issues raised during Consultation

- The majority of submissions touched on air quality. Every day topics like noise and odour were felt to have been given insufficient attention. Many submissions called for increased emphasis on Ireland's international commitments and obligations especially The EU Clean Air Policy Package, The CAFE Directive, the National Emissions reduction Target for PM_{2.5}, and the DECLG plan for A National Clean Air Strategy. Many submissions recognised the importance of GHGs and emphasised Ireland's national and International commitments. The difference between Ireland's obligations and responsibilities in relation to the role it adopts with respect to GHGs and how this will effect third world countries was highlighted by some submissions.
- There were repeated calls for more detail on proposed mitigation and serious doubt was expressed about agriculture's ability to deliver on present commitments.
- Many submissions perceived within *Food Wise 2025* the possibility of increased livestock numbers directly contributing to increased emissions of greenhouse gases and ammonia and in consequence called for increased mitigation measures within the SEA Environmental Report.
- Submissions noted the increased threat to human health through emissions to air of ammonia with a consequent increase in PM_{2.5}. The possibility of a critical nitrogen load exceedance and consequent damage to ecosystems and biodiversity on both land and water based was noted.
- Increased monitoring was called for particularly in areas where increases in livestock numbers occur.
- A number of submissions pointed to the lack of novel mitigation measures and questioned the ability of in-the-pipeline research to deliver adequate mitigation measures so that Ireland could comply with its international obligations.
- Some submissions challenged the claim that Irish Agricultural production was a world leader in terms of low intensity carbon production and called for an evidence base for such claims.
- Additional research into the carbon sequestration potential of forests and grass land was also called for.

Food Wise 2025 Response and Changes Made

- The Baseline Section and the Strategic Environmental Objectives have been expanded within the SEA Environmental Report to reflect concerns raised about noise and odour.
- Recommendations within the implementation chapter of *Food Wise 2025* reflect the imperative that farming activities and in particular industrial and processing facilities associated with food production adhere to the highest standards and at a minimum fulfil their legal obligations.
- Changes have been made within the SEA Environmental Report to additionally reflect Ireland's international commitments and obligation with specific reference to the EU Clean Air Policy Pack, the CAFE Directive and National Emission Reduction Targets in relation to PM_{2.5}.
- Agriculture's commitment to adhere to provisions of a future DECLG National Clean Air Strategy are reflected in the recommendations of *Food Wise 2025*.
- Text changes within the SEA Environmental Report give greater emphasis to Ireland's international obligations in relation to GHGs.
- Ireland's role as a food producer adhering to the highest standards and achieving a low carbon footprint per unit of product is reflected in *Food Wise 2025*. The recommendations within the implementation section of

Food Wise 2025 point to further relevant actions in recognition of Ireland's responsibilities in relation to global GHG emissions.

- The role and need for additional mitigation has received increased emphasis throughout the SEA Environmental Report and the consequences of failure to deliver on mitigation has been highlighted. The implementation section of *Food Wise 2025* recommends increased research and funding in relation to the rollout of mitigation measures.
- The SEA Environmental Report has placed greater emphasis on the necessity to develop and improve mitigation measures as a precursor to any increases in overall livestock numbers. This is in recognition of the direct relationship between greenhouse gas and ammonia emissions and gross livestock numbers. The implementation section of *Food Wise 2025* strengthens the commitment to sustainability and the achievement of increases in output only through sustainability.
- The threat to human health through emissions of ammonia and a consequent increase in particulate matter has received further attention in the SEA Environmental Report and is reflected through text changes both in the SEOs and proposed mitigation. This is reflected in the implementation section of *Food Wise 2025* through the proposals in relation to ammonia monitoring.
- There is increased emphasis within the SEA Environmental Report on the direct relationship between increases in livestock numbers and increased emissions of ammonia and GHGs to the atmosphere. This is further reflected in the recommendations section of *Food Wise 2025*. There is additional reference and clarification within the SEA Environmental Report in relation to Ireland's compliance with its international obligations in relation to both ammonia and GHGs.
- There are further reference to the challenges faced by the agri-food industry generally post 2020 if ongoing international discussions and agreements result in the necessity for further reductions in GHG and ammonia emissions. Attention is drawn to the direct link between animal numbers and GHG and ammonia emissions. Recommendations within *Food Wise 2025* further emphasise the commitment to strengthen measurement of emissions and to bring forward mitigation measures.
- The need for carbon efficiency and the developments reputation and a world leadership role in relation to low carbon intensity production systems is strengthened through increased commitment in *Food Wise 2025* implementation section to measuring, monitoring and research in this area.
- Amendments have been made to the SEA Environmental Report to strengthen the calls for research and action in relation to carbon sequestration potential both in forest and permanent grassland. These are reflected in the recommendations section in the Implementation Chapter of *Food Wise 2025*.

5.4 Biodiversity and Flora & Fauna

Issues raised during Consultation

- The risks to biodiversity presented by the expansion of the forestry sector was raised in many submissions.
- The risk to biodiversity supported by peatlands in particular was highlighted. Practices such as burning on marginal lands were highlighted.
- Many submissions raised the threat to wider biodiversity presented by the intensification of agricultural practices both in cropping and animal numbers.
- The threat to hedgerows and particularly species mixed within hedgerows was raised in relation to biodiversity.
- Submissions called for increased detail in the SEA Environmental Report in relation to birds. Specific actions in relation to hen harriers and other birds was called for.
- Submissions pointed to legal obligations in relation to bird populations while others called for objectives to be set for increases in currently declining bird populations.
- It was suggested that the SEA Environmental Report could be strengthened by the inclusion of a bird sensitivity map.
- Submissions called for a greater emphasis to be given to the role and importance of pollinators.

Food Wise 2025 Response and Changes Made

- Within the SEA Environmental Report greater emphasis has been given to the measures contained within the Forestry Programme 2014 – 2020 to ensure the protection of biodiversity in all afforestation proposals. In recognition that *Food Wise 2025* runs for five years outside the current forest programme these objectives are translated to action within *Food Wise 2025*.
- The SEA Environmental Report has highlighted the protection of peatlands under the Forrester program 2015-2020. These protections are reflected and carried forward in *Food Wise 2025*.
- Text changes within the SEA Environmental Report call for adherence to GAEC.
- The issue of intensification has been addressed throughout the SEA Environmental Report by increasing the emphasis on sustainability representing the bringing forward of mitigation measures prior to any planned increases in livestock numbers. These commitments are represented by actions within *Food Wise 2025*.

- Matters in relation to the removal of hedgerows are covered within the SEA Environmental Report through recommendations for continuation of conditions under the basic payment scheme. A new recommendation in relation to replanting hedgerows and species mix has been added.
- Greater detail in relation to birds has been included in the SEA Environmental Report together with the addition of monitoring recommendations. These are reflected in the implementation section of *Food Wise 2025*.
- The SEA Environmental Report contains text changes to reflect obligations under the Birds directive. Increased monitoring of bird populations is recommended. A recommendation for the creation of a bird sensitivity map has been included in the SEA Environmental Report.
- The role of pollinators has been emphasised through the strategic environmental objectives of the SEA Environmental Report and through recommendations on monitoring.

5.5 General issues

Issues raised during Consultation

- Submissions pointed to a lack of detail in relation to the choice of scenarios to be analysed and in the definition of scenarios.
- Submissions suggested that the choice of the sustainable growth scenario represented an acceptance that the agri-food industry was on a growth path.
- Submissions called for the development of an alternative scenario involving reductions in output at primary production level.
- It was the opinion of some submissions that the *Base Case Scenario* did not represent the do-nothing scenario and that a separate do-nothing scenario should have been analysed.

Food Wise 2025 Response and Changes Made

- *Food Wise 2025* represents a vision or plan for the agri-food industry including primary production, processing, market selection, product mix, input from government and agencies which seeks to encapsulate an optimum, sustainable and profitable output growth path to 2025. *Food Wise 2025* does not contain any specific proposals for increases in livestock numbers. The target of increasing the value of primary production by 65% is to be achieved through a combination of improved market participation, improved product mix, better adoption of already available technologies at farm level, changes in enterprise mix at farm level and where mitigation is available possibly by increases in livestock numbers. It has been adopted within a rapidly changing regulatory, production and demand environment. It is addressed to a sector that is subject to constant change and volatility. The major change in income levels and production economics brought about by reductions in world commodity prices witnessed since the draft document was published in July of 2015 is evidence of this volatility. Historically expansion or contraction at primary production level is driven, primarily by world product prices as they affect profitability.
- *Food Wise 2025* is a high level strategy which seeks to guide the individual sectors on a path towards sustainability. The adoption of the *Sustainable Growth Scenario* and the rejection of alternatives which were demonstrated to increase the risk of failure to meet Ireland's international obligations with respect to climate change, air quality, water quality and biodiversity represents a new focus by the broader agri-food industry of its specific role and obligations with regard to the environment.
- In response to the submissions the SEA Environmental Report has been amended to clarify and better define the scenarios examined. Text changes amplify the rationale for the selection of the *Sustainable Growth Scenario* by the *Food Wise 2025* committee. The SEA Environmental Report has included a recommendation in relation to the monitoring of livestock numbers as a proxy for GHG and ammonia emissions. These changes have been carried through to *Food Wise 2025* and are reflected in the implementation section of the final *Food Wise 2025* report.
- A recommendation that DAMF commission further research on production methodologies to facilitate the development of the sustainability scenario is included in the SEA Environmental Report and the implementation section of *Food Wise 2025*. In addition a recommendation for cost benefit analysis in relation to mitigation measures for ammonia emissions is included in the SEA Environmental Report and the implementation section of *Food Wise 2025*.

Issues raised during Consultation

- Many submissions noted the absence of specific growth targets in both the draft SEA Environmental Report and *Food Wise 2025*. On this basis it was noted that a quantitate analysis of increases in GHG or ammonia emissions was impossible.
- Some submissions claim an already increasing trajectory in livestock numbers will inevitably lead to breaches in greenhouse gas and ammonia targets.

Food Wise 2025 Response and Changes Made

- While *Food Wise 2025* targets an increase in the value of primary production of 65% it does not specify any increases in livestock numbers. On the contrary as a high level plan it adopts sustainability as its central theme. *Food Wise 2025* states: “*Environmental protection and economic competitiveness are equal and complementary: one will not be achieved at the expense of the other.*”

Issues raised during Consultation

- Some submissions questioned the basis of the plan and suggested that any plan which foresaw the continuation of ruminant based production systems was not compatible with Ireland’s obligation in relation to GHGs. Submissions called for a reduction in what they described as non-profitable suckler beef enterprises as a means of reducing GHG emissions.
- It was the opinion of some submissions that carbon efficiency was not a legitimate or provable claim and consequently a gross reduction in GHG emissions from the agriculture sector was required rather than improvements in carbon efficiency.

Food Wise 2025 Response and Changes Made

- Food Wise 2025* is intended to inform policy makers and shape the overall direction of the agri-food industry for the period to 2025. It is not intended as a specific policy instrument aimed at individual sectors but rather it is intended to provide guidance and parameters within which the industry should develop. In practise the adoption of *Food Wise 2025* will see the acceptance at policy level that livestock numbers must be monitored into the future as a direct proxy for GHG emissions. In this regard there may be need for direction change at the implementation stage should increased numbers occur in the absence of additional mitigation.

Issues raised during Consultation

- Submissions point to perceived current breaches in regulation and speculated implied future breaches in relation to biodiversity and water quality.
- Submissions suggested that current legislation was weak and inadequate to future requirements. Submissions called for increased enforcement measures and increased prosecutions under existing legislation.

Food Wise 2025 Response and Changes Made

- Food Wise 2025* anticipates the continuation of all existing agri-environment codes and regulations. The SEA Environmental Report contains at Annex VI the complete suite of existing regulation applicable under GAEC together with the additional conditionality attached to the basic payments scheme system.
- Text changes have been made in the SEA Environmental Report to reflect the importance of continued adherence to regulation. The key role of knowledge transfer in improving compliance have been strengthened and these concerns are reinforced throughout *Food Wise 2025* and in the implementation chapter of that document.

Issues raised during Consultation

- The need for policy coherence between *Food Wise 2025* and other government policies was the subject of a number of submissions.
- It was proposed that the promotion of a healthy diet worldwide and the consequent reduction in food production requirements represented the most viable mitigation measure available.
- Issues in relation to world food security as it is affected by GHG emissions from developed countries were raised.
- Submissions called for the extension of the polluter pays principle to be applied at sectoral level within the agri-food industry.

Food Wise 2025 Response and Changes Made

- Food Wise 2025* is intended as a national high level indicator of the direction which the Irish agri -food industry should follow towards a path to achieving a high sustainability status towards 2025. This strategy is intended to guide the agri-food industry and ensure that decision makers can act at an early stage to achieve compliance with all present and foreseen national and international obligations. In addition the strategy promotes healthy living and the development of human capital through education, upskilling, knowledge transfer and economic sustainability

- In so far as possible and in so far as the above submissions are not too remote to the SEA Environmental Report or *Food Wise 2025* text changes have been made which emphasise the importance of these topics.

6 Influence of SEA during Preparation of *Food Wise 2025*

The SEA process, including the AA, took place in conjunction with the preparation of *Food Wise 2025*. From the commencement of the process joint meetings between the SEA/AA team and the *Food Wise 2025* committee were undertaken. This ensured that from the outset of the process the *Food Wise 2025* committee considered the environmental consequences of their draft proposals and that these environmental consequences were fully taken into account. An iterative process was established between the SEA/AA team and the chairs of the sector groups which ensured that the environmental objective were aligned from the start with the objectives of *Food Wise 2025*.

Table 6-1 demonstrates the iterative process and interaction between the SEA and AA team and the *Food Wise 2025* committee and how these interactions influenced the preparation of *Food Wise 2025*.

Table 6-1 Influence of SEA & AA process during preparation of *Food Wise 2025*

Activity	Purpose	Result
Initial meeting of SEA/AA team and <i>Food Wise 2025</i> Committee and further follow-up contacts and meetings	<ul style="list-style-type: none"> Achieve understanding of broad objectives of <i>Food Wise 2025</i> Convey requirements of SEA/AA process and interaction and co-dependence between the plan and the SEA and AA 	<ul style="list-style-type: none"> Full understanding of interrelationship between planning process and requirements of SEA/AA achieved
SEA/AA team meetings with individual sectoral sub-committee chairs	<ul style="list-style-type: none"> Receive initial outline of draft plans for sectors Identification of potential impacts and issues 	<ul style="list-style-type: none"> Set direction towards overriding importance of sustainability when developing actions
Consultation with <i>Food Wise 2025</i> committee on draft strategy position	<ul style="list-style-type: none"> To ensure emerging draft plan is in compliance with SEA and AA requirements 	<ul style="list-style-type: none"> Integration of SEA and AA process in the preparation of the draft plan
Production of draft Policy Guidance Note	<ul style="list-style-type: none"> To inform the preparation of the plan 	<ul style="list-style-type: none"> Emerging plan compatible with Sustainability Objectives
Preparation of Issues Paper	<ul style="list-style-type: none"> To enable the <i>Food Wise 2025</i> committee and statutory consultees to comment on scope of assessment 	<ul style="list-style-type: none"> The <i>Food Wise 2025</i> committee have a better understanding of the environmental issues The assessment is based on robust foundations
Preparation of Scoping Paper and Scoping Workshop	<ul style="list-style-type: none"> To ensure all relevant environmental issues are assessed and to hear the views of stakeholders 	<ul style="list-style-type: none"> Planning and analysis proceeded in tandem
Production and discussion of Scoping Report	<ul style="list-style-type: none"> Reconciliation of draft targets with scope of environmental assessment 	<ul style="list-style-type: none"> Ensured preparation of plan is in compliance with environmental requirements
Discussion of draft Analysis and Proposed Mitigation	<ul style="list-style-type: none"> To ensure <i>Food Wise 2025</i> committee bring forward appropriate mitigation where negative impacts are anticipated 	<ul style="list-style-type: none"> Modification of plan to fit with available mitigation Proposals for additional mitigation
Preparation and discussion with <i>Food Wise 2025</i> committee of draft SEA Environmental Report and draft NIS	<ul style="list-style-type: none"> To ensure compatibility between draft Plan, draft SEA Environmental Report and draft NIS 	<ul style="list-style-type: none"> Further modification of plan including addition of actions on sustainability and addition of further mitigation measures

As a result of the above iterative process the following is a summary of the key influence of SEA during the preparation of *Food Wise 2025*.

- Reinforcement of decision to place sustainability and sustainable intensification as a cornerstone of *Food Wise 2025*.
- Decision to include a specific chapter and actions on sustainability.

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- Decision to adopt as a guiding principal Ireland's national and international obligation in relation to GHG and ammonia, water quality and biodiversity within *Food Wise 2025*.
 - Decision to frame all actions within *Food Wise 2025* to ensure that sustainability is achieved.
 - Decision to set quantitative targets in the context of available mitigation to ensure sustainability.
 - Inclusion within *Food Wise 2025* of improved monitoring and mitigation to ensure and verify sustainability.
 - Commitment to increased emphasis at implementation phase to the promotion of increased research, knowledge transfer and rollout of new mitigation measures to improve compliance and ensure sustainability.
 - Formation of Sustainability Sub-Committee by the HLIC to oversee and guide sustainability actions during the implementation phase.
 - Decision to include an Implementation Chapter within *Food Wise 2025* which fully reflects the AA and SEA process and highlights the findings and recommendations of the SEA Environmental Report.

7 Preferred Scenario

7.1 Introduction

In accordance with SEA Directive (EC/2001) alternatives to the proposed strategy were considered. The alternatives considered are outlined in detail in Section 1.8 of this document.

In summary the alternatives assessed here are:

- **Base Case Scenario** is considered to be the best proxy for a business as usual or a do nothing scenario. This scenario is representative of what would happen in the absence of a new plan. This would involve the continuation of the moderate increases in output seen over recent years, mainly achieved through improvements in technology and management techniques.
- **Base Case + Scenario** would be achieved if the anticipated expansion in dairy cow numbers planned by farmers and the processing industry can be leveraged by substantial increases in the use of best technology facilitated by enhanced knowledge transfer programmes. The strategy target to achieve output of 8.8 billion litres by 2025 could be achieved with an increase of 30% in dairy cow numbers (reaching 1.4 million) coupled with increases in output per cow.
- **Sustainable Growth Scenario:** In order to mitigate potential environmental impacts arising from the above scenarios a *Sustainable Growth* scenario was developed. This scenario recognises that environmental protection and sustainability will need to be central to any increases in production.

7.2 Assessment of Alternatives

Each of the alternative plan proposals was assessed to determine the potential of these plans at a strategic level to impact on the strategic environmental objectives. This assessment informs the decision making process in terms of identifying the most appropriate plan to bring forward and develop in detail. The alternatives analysis table is presented below in Table 5-2. However, in summary *Food Wise 2025* has been developed after considering a number of alternative scenarios which are:

- 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 and neither industry nor policy makers would change direction or set new objectives which would be more in line with Ireland's developing international commitments and targets.
- The *Base Case +* scenario which was analysed represented more ambitious levels of expansion than recent historical trends. The *Base Case +* scenario would have involved an increased emphasis on primary agricultural production, perhaps set in expectations for an expanding production base. In the case of the dairy sector it might be achieved if the anticipated expansion in dairy cow numbers, planned by farmers and the processing industry, could be leveraged by substantial increases in the use of best technology facilitated by enhanced knowledge transfer programmes.

In recognition of the agri-food sector's pivotal role across all environmental media particularly air quality, GHG emissions, biodiversity and water quality; and to ensure compliance by the agri-food sector with existing obligations under the Water Framework Directive, the Biodiversity Action Plan, and international commitments in relation to GHG emissions and air quality; it was recognised in the course of drafting *Food Wise 2025* that the development of a *Sustainable Growth* scenario was appropriate.

This scenario recognises that environmental protection and sustainability will need to be central to any increases in production. Provisional analysis established that this scenario represented the most environmentally advantageous outcomes. This scenario has broadly positive outcomes under the SEOs. In instances where a slight negative impact, mainly as the result of uncertainties, the application of existing mitigation measures has the potential to reduce the impact to neutral.

In the Environmental Analysis the *Sustainable Growth* scenario was brought forward for fuller analysis as the most appropriate scenario representation of *Food Wise 2025*. The analysis was undertaken in light of existing regulation and available mitigation measures.

7.3 Reasons for the Selection of the Preferred Option & Rejection of Reasonable Alternatives

Each of the alternative plan proposals was assessed to determine the potential of these plans at a strategic level to impact on the strategic environmental objectives. This assessment informs the decision making process in terms of identifying the most appropriate plan to bring forward and develop in detail. In summary *Food Wise 2025* has been developed after considering a number of alternative scenarios.

The *Base Case* scenario is considered to be the best proxy for a business as usual or a do nothing scenario. This scenario is representative of what would happen in the absence of a new plan. This would involve the continuation of the moderate increases in output seen over recent years, mainly achieved through improvements in technology and management techniques.

The adoption of the *Base Case* scenario could result in the following:

- Increased risk of nutrient discharge to water;
- Potential risks to designated ecological sites as agricultural, forestry and seafood production expands;
- Increases in GHG and ammonia emissions;
- Less sustainable agricultural output; and
- Potential for changes in landscape character arising from land use changes to facilitate increased production.

It is considered that this scenario has potential for less sustainable agricultural, forestry and sea food sectors and in the absence of effective management and monitoring of discharges/emissions and disturbance arising from these sectors, there would be an overall moderate negative impact.

The *Base Case +* scenario represented more ambitious levels of expansion than recent historical trends. In the case of the dairy sector it might be achieved by expansion in dairy cow numbers leveraged by substantial increases in the use of best technology facilitated by enhanced knowledge transfer programmes. This scenario could have significant economic benefits in terms of increased agricultural and processing outputs which would benefit the rural economy. However in the absence of improved sustainable production and processing, this alternative has the potential to have a moderate negative effect on the receiving environment.

The adoption of the *Base Case +* scenario could result in the following:

- Increased risk of nutrient discharge to water;
- Potential risks to designated ecological sites as agricultural, forestry and seafood production expands;
- Increases in GHG emissions and reduced air quality;
- Less sustainable agricultural output; and
- Potential for changes in landscape character arising from land use changes to facilitate increased production.

The *Sustainable Growth* scenario differs from the other potential scenarios in the recognition of the necessity for the agri-food, forestry and marine sector to contribute and help fulfil both national and international obligations across all relevant environmental parameters. The choice of this strategy in favour of the other alternatives imposes responsibilities on the agri-food and marine industry to develop appropriate and effective mitigation strategies to ensure that any increases in primary production can only occur having full regard to Ireland's national and international obligations specifically in relation to: the maintenance and improvement of

biodiversity; the maintenance and improvement of water quality status; and the improvement of air quality including a reduction in GHG emissions.

The *Sustainable Growth* scenario focusses on the need for targeted research, the roll-out of mitigation and increased monitoring to verify and substantiate the role of the agri-food industry within the environment. Knowledge transfer, the further roll-out of the Origin Green programme and other initiatives aimed at reducing the carbon footprint of the agri-food industry are promoted.

The preferred option is translated within *Food Wise 2025* to a guiding principle:

“A guiding principle to meet these sustainability goals will be that environmental protection and economic competitiveness will be considered as equal and complementary, one will not be achieved at the expense of the other. The three pillars of sustainability - social, economic and environmental - are equally important and carry commensurate weight ensuring that as the sector continues to develop and grow this development will be undertaken in the context of addressing environmental challenges.”

8 Measures to Monitor Significant Environmental Effects of the Implementation of *Food Wise 2025*

8.1 Introduction

Monitoring the significant negative effects of implementing the plan is an essential on-going element of the SEA process. Monitoring assists in evaluating the performance of the plan and as such assists in determining whether the identified sustainability objectives are being achieved; allows early identification of unforeseen adverse effects; and thus appropriate remedial action can be taken to deal with any issues or problem areas, particularly in the event where required thresholds are crossed. It is inappropriate to monitor everything and monitoring proposals should be focused on the following areas that:

- Indicate a likely breach of international, national or local legislation, recognised guidelines or standards;
- May give rise to irreversible environmental, economic or social damage, with a view to identifying trends before such damage occurs; and
- Are subject to uncertainty in the SEA and where monitoring would enable prevention or mitigation measures to be taken.

8.2 Monitoring Proposals

While the SEA Environmental Report does not identify the potential for significant negative effects arising from *Food Wise 2025*, nonetheless the potential for changes at primary production level generates the need for additional monitoring. It is on these areas that monitoring proposals focus. Table 8-1 presents monitoring proposals that were developed as a result of potential negative effects identified during the assessment process.

Monitoring proposals for the next five to ten years have been developed for *Food Wise 2025*. As part of *Food Wise 2025* implementation phase DAFM will work closely with relevant agencies to ensure appropriate monitoring across all sectors of the agri-food industry on the environmental impacts of the strategy including possible impacts at regional level. This implementation process will include evaluation and assessment of the delivery of sustainability and mitigation actions set out in the strategy report.

In order to allow for the appropriate implementation of mitigation measures and monitoring programmes it is recommended that a Sustainability Sub-Committee be convened during the duration of the plan to review the ongoing environmental performance of the plan. This subgroup would have the capacity to reconsider new and additional mitigation and monitoring if considered appropriate during the duration of the plan.

Table 8-1 SEA Monitoring Framework

Sector	Food Wise 2025 Action	Issue	Indicator	Monitoring	Responsibility	Timescale	Interaction with Other Organisations
General	Use of Origin Green programme	Many of the actions require uptake of the Origin Green programme. To ensure uptake and success, and realisation of environmental benefits this needs to be monitored on a farm by farm basis and on a facility by facility basis.	<ul style="list-style-type: none"> Number of farms and facilities registered under the Origin Green programme as a percentage of total in the Country 	An annual report will be generated outlining an analysis on the performance and uptake of the Origin Green programme.	Bord Bia	Annually	Farmers, growers, processors
Chapter 5	Growth opportunities	Sectoral expansion has potential for negative effects on water quality, biodiversity, soil quality, GHG emissions, waste generation, and landscape through intensification, change in land use, use of fertilisers, and increase in animal numbers.	See sector specific monitoring below		-	-	-
Dairy, Beef & Sheep	Farm, grassland and soil management	<p>Negative effects from use of fertilisers on water quality, species, and habitats.</p> <p>Increased GHG emissions from liming.</p> <p>Increased GHG emissions from increased livestock numbers.</p> <p>Negative effects on biodiversity and designated sites from land pressures and use of fertilisers, manures etc.</p>	<ul style="list-style-type: none"> Ecological and chemical status of water bodies Pollution incidents to land or water Concentrations of nitrates and phosphorous in water bodies Sampling water bodies against WFD targets Area of land using liming and associated emissions footprint Extent and condition of protected areas in or near farmland 	<p>A review will be undertaken on an annual basis of EPA water quality monitoring results in order to identify trends in terms of nutrient loading to catchments, chemical and biological water status with regard to the water status required under the WFD.</p> <p>Catchment/regional monitoring where increased livestock numbers are anticipated</p> <p>A review of DAFM/Teagasc Catchment</p>	DAFM	Annually	NPWS/ EPA

Sector	Food Wise 2025 Action	Issue	Indicator	Monitoring	Responsibility	Timescale	Interaction with Other Organisations
			<ul style="list-style-type: none"> Numbers and type of livestock – proxy for methane emissions 	<p>assessments to monitor changes in nutrient loading</p> <p>An annual report will be issued detailing the results of an analysis of GHG emissions arising from agriculture. This report will report on the sectorial emissions and identify any trends over time.</p>			
Sheep	Processing actions	Increased demand on the disposal of sheep carcasses after boning may have adverse effects for waste management capacity	<ul style="list-style-type: none"> Volume of sheep carcasses for disposal against local waste facility capacity 	DAFM will report on the animal disposal of annual carcasses and identify any capacity issues at waste acceptance facilities.		Annually	
Cereals/ Tillage/ Grassland	Farmer actions	<p>Potential adverse impacts on the integrity of European sites if the changes in the type of crop would affect supporting roles played for European sites</p> <p>Change of land use and intensification of harvest patterns can also affect landscape</p>	<ul style="list-style-type: none"> Changes in land use land cover over time Landscapes measures implemented under agri-schemes Extent and condition of protected areas in or near farmland 	<p>DAFM to report annually on changes in cropping pattern and permanent pastures to monitor emerging trends.</p> <p>An annual workshop will be held with relevant state agencies and stakeholders where impacts arising due to the expansion of agricultural activities will be discussed. Observed impacts and/or potential impacts will be discussed and mitigation measures agreed where required.</p>	DAFM	Annual/ 5 years	EPA
	Processor actions	Change of land use and intensification of harvest patterns has a potential negative effect on landscape and European designated sites (if changes to land use remove the supporting role that some fields play for bird species using SPAs)					

Sector	Food Wise 2025 Action	Issue	Indicator	Monitoring	Responsibility	Timescale	Interaction with Other Organisations
				A review of landscape character will be undertaken (on a 5 year basis) which will entail a review of LCA's undertaken by local authorities. This review will include undertaking consultation with Local authorities, Department of Environment Community and Local Government and Department of Arts Heritage and Gaeltacht.			
	Cross cutting actions	Change of land use and intensification of harvest patterns has a potential negative effect on landscape and European designated sites					
PCF & Alcoholic Beverages	Department and state agencies	Potential for negative effect on landscape, biodiversity and water quality from intensification of harvest patterns and use of fertilisers	<ul style="list-style-type: none"> • Ecological and chemical status of water bodies • Pollution incidents to land or water • Concentrations of nitrates and phosphorous in water bodies • Sampling water bodies against WFD targets 	A review will be undertaken on an annual basis of EPA water quality monitoring results in order to identify trends in terms of nutrient loading to catchments, chemical and biological water status with regard to the water status required under the WFD.	DAFM	Annually	
Forestry	Expansion of the forest resource	Increased afforestation has potential for negative effects on designated	<ul style="list-style-type: none"> • Soil pH 	A review will be undertaken on an annual	DAFM	Annually	EPA

Sector	Food Wise 2025 Action	Issue	Indicator	Monitoring	Responsibility	Timescale	Interaction with Other Organisations
		sites, landscape, biodiversity, water quality, and soil degradation	<ul style="list-style-type: none"> • Soil organic matter/ carbon content 	basis of EPA water quality monitoring results in order to identify trends in terms of nutrient loading to catchments, chemical and biological water status with regard to the water status required under the WFD.			
	Supply Chain	Increased roundwood harvest has potential for negative effects on designated sites, landscape, biodiversity, water quality, and soil degradation	<ul style="list-style-type: none"> • Changes in land use land cover over time • Ecological and chemical status of water bodies • Pollution incidents to land or water • Concentrations of nitrates and phosphorous in water bodies • Sampling water bodies against WFD targets 				
	Wood Processing	Use of treatment chemicals in wood processing could have negative effects on water quality, emissions, and soil contamination depending on the location of the processing facility and methods/standards employed	<ul style="list-style-type: none"> • Soil sampling – pH, chemicals • Ecological and chemical status of water bodies • Pollution incidents to land or water • Concentrations of nitrates and phosphorous in water bodies • Sampling water bodies against WFD targets 		DAFM	Annually	EPA
Seafood	Expand the raw materials base	Potential negative effects on European designated sites, biodiversity, water quality and seascape from sector expansion	<ul style="list-style-type: none"> • Ecological and chemical status of water bodies • Extent and condition of marine protected areas in or near seafood 	A review will be undertaken on an annual basis of EPA water quality monitoring results in order to identify trends in terms of nutrient loading			EPA

Sector	Food Wise 2025 Action	Issue	Indicator	Monitoring	Responsibility	Timescale	Interaction with Other Organisations
			growing or fishing waters	to catchments, chemical and biological water status with regard to the water status required under the WFD.			
	Optimise product added value, export markets & environmental sustainability	Potential negative effects on European designated sites, biodiversity, water quality and seascape from sector expansion		Continue existing conditionality for new licence applications including EIA screening and stakeholder consultation.			
Cross Cutting		Birds Biodiversity (including pollinators)		DAFM to develop suitable monitoring of its RDP (GLAS) programme in line with proposals under RDP 2014-2020 (GLAS) to monitor and report on general impact on biodiversity (including pollinators). DAFM in consultation with other relevant government departments and state agencies to take account of other national monitoring initiatives, in particular regarding the conservation status of Natura 2000 sites.			

9 Conclusion

The SEA and AA processes carried out during the preparation of *Food Wise 2025* has ensured that any potential significant environmental impacts associated with implementation of the *Food Wise 2025* have been identified and that they have been given appropriate consideration. Consultation on the draft *Food Wise 2025*, SEA Environmental Report and NIS has further contributed to the development and finalisation of *Food Wise 2025*, as agreed by the HLIC appointed by the Minister of Agriculture, Food and the Marine.

As a result of the influences outlined above a new Implementation Chapter was added to *Food Wise 2025*. This Implementation Chapter has been assessed. It is deemed that additional positive impacts, particularly in the areas of biodiversity, flora and fauna, water quality, air quality and climate change, will accrue as a result of the amendments contained in the Implementation Chapter of *Food Wise 2025*.



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