

Draft Agri-Food Strategy 2030 — Executive Summary

Draft for Public Consultation

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Executive Summary

Key Messages and Targets

Ireland will become a world leader in Sustainable Food Systems (SFS) over the next decade. This should deliver significant benefits for the Irish agri-food sector, for Irish society and the environment. It should also provide the basis for future competitive advantage.

A sustainable food system is profitable throughout (economic sustainability), has broad-based benefits for society (social sustainability) and has a positive or neutral impact on the natural environment (environmental sustainability). This Strategy sets out four high-level missions to be achieved in order to develop such a system in Ireland:

- 1. A Climate Smart, Environmentally Sustainable Agri-Food Sector
- 2. Viable and Resilient Primary Producers with Enhanced Wellbeing
- 3. Food that is Safe, Nutritious and Appealing, Trusted and Valued at Home and Abroad
- An Innovative, Competitive and Resilient Sector, driven by Technology and Talent.

Each of these Missions has a set of Goals which are underpinned by a series of Actions.

High-level targets for 2030:

1. A Climate Smart, Environmentally Sustainable Agri-Food Sector

- A Climate-neutral food system by 2050, with verifiable progress achieved by 2030, encompassing emissions, carbon sequestration, air, biodiversity and water quality:
 - GHGs Biogenic methane reduction of a minimum of 10% by 2030.
 - Air quality Reduce ammonia emissions below 107,500 tonnes by 2030.
 - Water quality Agriculture will reduce nutrient losses to water by 50% by 2030.
 - Biodiversity -10% of farmed area prioritised for biodiversity, spread across all farms throughout the country, by 2030.
 - Forestry: Increase afforestation and double the sustainable production of biomass from forests by 2035.
 - Seafood: Achieve 30% of marine protected areas by 2030
 - Organic farming: Reach at least 7.5% of UAA by 2030
 - Halve per capita food waste by 2030.
- A strengthened Origin Green, with an emphasis on strong metrics and evidence.

2. Viable and Resilient Primary Producers with Enhanced Wellbeing

- High ambition for primary producers, focusing on the premiumisation of output, increased integration of certain sectors, and diversification of activity and income streams
 - o Improved primary producer performance across a range of indicators, as measured by the National Farm Survey (NFS) and BIM.
 - Strong and functioning collaborative structures for primary producers.
 - o Increased tillage, horticulture, organic and agro-forestry production.
- A more equitable distribution of value along the value chain, with recognition that higher ambition in sustainability has a cost.
 - Increase market transparency, including transposition of the UTP Directive and establishment of the office of the National Food Ombudsman (or equivalent).

- Enhanced social sustainability, encompassing well-being (including health and safety), generational renewal and diversity
 - Strong supports including mandatory health and safety training
 - o Improved primary producer performance across a range of indicators, as measured by the NFS.

3. Food that is Safe, Nutritious and Appealing, Trusted and Valued at Home and Abroad

- Coherence of policies for food, health and nutrition, nationally, at the EU level and through international policy generally.
 - O Co-ordinate national policies for food, health and nutrition
 - O Better labelling and reformulation for healthier diets.
- > Enhancement of consumer trust through providing evidence of safe and ethical food production.
- Creation of value-add, through insight and innovation, supporting the food sector and continuing to develop market opportunities at home and abroad.
 - Sustainably develop Ireland's food and drink offering, with new ambition for value-add and new markets with a view to agri-food exports reaching €21 billion by 2030.

4. An Innovative, Competitive and Resilient Sector, driven by Technology and Talent

- An innovation, knowledge and technology driven sector.
 - o Implementation of the recommendations of the High-Level Innovation Team
 - Private R&D to reach 1% of turnover by 2025.
- Improvement of competitiveness and resilience along the food chain.
 - An enabling public policy including appropriate supports, ensuring access to finance and a focus on competitiveness issues specific to the agri-food sector.
- Attraction and nurturing of diverse talent.
 - o Develop a strategy for the agri-food sector on education, skills and talent attraction and retention.

Ireland will advocate for sustainable food systems internationally and for the development of a recognised SFS measurement or index.

Strong monitoring and implementation is crucial to the success of this Strategy.

The 2030 Vision for Ireland's Agri-Food Sector

Ireland will become a world leader in Sustainable Food Systems over the next decade. This should deliver significant benefits for the Irish agri-food sector itself, for Irish society and the environment. In demonstrating the Irish agri-food sector meets the highest standards of sustainability — economic, environmental, and social — this should also provide the basis for the future competitive advantage of the sector. By adopting an integrated food systems approach, Ireland will seek to become a global leader of innovation for sustainable food and agriculture systems, producing safe, nutritious, and high-value food that tastes great, while protecting and enhancing our natural and cultural resources and contributing to vibrant rural and coastal communities and the national economy.

The Strategy proposes the steps which should be taken over the next decade to turn the above vision into reality.

The term 'food system' covers 'all the elements and activities that relate to the production, processing, distribution, preparation, and consumption of food, and the output of these activities, including socio-economic and environmental outcomes'. Each country has its own distinctive food system, based on its natural resource base, climate, production patterns, eating habits and history. Food systems are expected to provide food security and nutrition for a world population which is projected to grow to nearly 10 billion by 2050. Food systems are also central to the livelihoods of hundreds of millions of households around the world. Moreover, they are not only highly dependent on the environment, but also exert significant pressure on it.

Using a 'food systems approach' for the 2030 Strategy

The 2030 Strategy is the fifth national agri-food strategy since 2000, developed by a broad range of stakeholders from across the sector. Each previous strategy was of its time and was determined by the circumstances of the time. While this Strategy has certain continuities with its predecessors, it signals a significant change in direction and policy, reflecting the very different context expected during the 2020s. It has been drawn up using a 'food systems approach' which acknowledges the link between policies for food, climate and the environment, and health, and focuses on the role each part of the food chain has in delivering the 2030 vision. Sustainability in its three forms – economic, environmental and social – are at the heart of the Strategy.

The context against which the Strategy has been developed is broad, complex and fast moving. Key issues which will shape the next decade include people and demographics; planning within planetary boundaries; health and nutrition; and innovation, competitiveness and human capital. The changing policy environment, influenced by the UK post-Brexit and developments at European and International level, will determine opportunities and challenges for the sector in the period to 2030.

The Strategy has adopted a framework which revolves around the concept of high-level Missions which are underpinned by a series of key goals and actions. This reflects a movement in recent times to mission-oriented policy which responds to 'grand challenges' and moves away from narrow sector-based approaches to more system-wide transformation.

This Strategy has four Missions and 22 Goals, which are set out below in the figures below.

Monitoring and Implementation

A Strategy is worthless without proper monitoring and implementation. For this reason, a Monitoring and Implementation Framework is included. This highlights areas for collaboration and partnership within the sector but also with key external stakeholders such as retailers, consumers, finance providers and others. It also details oversight and monitoring mechanisms for implementation, including the establishment of a High Level Implementation Committee chaired by the Minister for Agriculture, Food and the Marine, and its key task will be to ensure the delivery of the four Missions. Specific monitoring requirements for environmental aspects are laid out, including the establishment of an Environmental Working Group. This Group will enable the environmental performance of the Strategy to be evaluated and allow any negative trends to be identified early and remedial action and responsibilities to be determined. It will also provide for increased transparency during implementation. A more detailed plan with the actions and their owners, deliverables and timeline for implementation is published separately, as is the Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA).

Mission 1:

A Climate Smart, Environmentally Sustainable Agri-Food Sector

Mission 4:

An Innovative, Competitive and Resilient Agri-Food Sector, Driven by Technology and Talent

Agri-Food Strategy 2030

Mission 2:

Viable and Resilient Primary Producers, with Enhanced Wellbeing

Mission 3:

Food that is Safe, Nutritious and Appealing, Trusted and Valued At Home and Abroad

MISSION 1

A CLIMATE SMART, ENVIRONMENTALLY SUSTAINABLE AGRI-FOOD SECTOR

- •GOAL 1: Develop a Climate Neutral Food System by 2050 and Improve Air Quality
- •GOAL 2: Restore and Enhance Biodiversity
- •GOAL 3: Protect High Status Sites and Contribute to Achieving Good Water Quality
- •GOAL 4: Develop Diverse, Multi-functional Forests
- •GOAL 5: Enhance the Environmental Sustainability of the Seafood Sector
- •GOAL 6: Embed the Agri-Food Sector in the Circular, Regenerative Bioeconomy
- •GOAL 7: Strengthen Origin Green & Sustainable Supports to Reflect the Higher Level of Ambition

MISSION 2

VIABLE AND RESILIENT
PRIMARY PRODUCERS
WITH ENHANCED WELLBEING

- •GOAL 1: Improve the Competitiveness and Productivity of Primary Producers
- •GOAL 2: Improve the Creation and Equitable
 Distribution of Value
- •GOAL 3: Increase Primary Producer System
 Diversification
- •GOAL 4: Improve the Social Sustainability of Primary Producers

MISSION 3

FOOD WHICH IS SAFE,
NUTRITIOUS AND
APPEALING, TRUSTED
AND VALUED AT HOME
AND ABROAD

- •GOAL 1: Prioritise Coherent Food and Health Policies to Deliver Improved Health Outcomes
- •GOAL 2: Enhance Consumer Trust in our Food System, Providing Evidence of a Safe, Ethical Food Supply
- •GOAL 3: Create Value-Add in Food Through Insight, Innovation and Product Differentation
- •GOAL 4: Develop Market Opportunities at Home and Abroad

MISSION 4

AN INNOVATIVE,
COMPETITIVE AND
RESILIENT AGRI-FOOD
SECTOR, DRIVEN BY
TECHNOLOGY AND
TALENT

- •GOAL 1: Move to a Challenge-Focused Innovation
 System
- •GOAL 2: A Strategic Funding Approach for Research, Development and Innovation
- •GOAL 3: Develop a Dynamic Knowledge Exchange Environment
- •GOAL 4: Enhance the Use of Technology and Data
- •GOAL 5: Maintain and Improve Competitiveness and Resilience
- •GOAL 6: Attract and Nurture Diverse and Inclusive
 Talent
- •GOAL 7: Policy Coherence in Sustainable Food Systems Between Ireland's Domestic Policy and its Development Cooperation and Foreign Policy

Executive Summary - Narrative

The Strategy and its wider context

The Strategy recognises that there needs to be a profound shift towards more sustainable policies and action, nationally and internationally. The Dáil (Irish Parliament) has declared a climate and biodiversity emergency: decisive action is required to implement the necessary legislative arrangements to act on this. The world needs to get back on track to meet the commitments on the Sustainable Development Goals (SDGs), the Paris Climate Agreement and the Global Convention on Biodiversity, and move towards more sustainable land use, production and consumption practices.

Moving towards a SFS should meet the needs of Irish society and position Ireland internationally in its trade and other relationships. The future source of competitive advantage for the Irish agri-food sector lies in being able to demonstrate that it meets the highest standards of sustainability (in all its forms), such that it can be considered among the world leaders in this field. This is the basis on which Ireland can meaningfully build on its 'green' reputation and aspire to gaining market share in expanding high value international markets and in certain cases, gaining a premium price for what it sells.

If this ambitious objective is to be achieved, Ireland's agri-food sector, along with Government and society, will have to make significant changes. The sector should aim to become climate-neutral by 2050, with verifiable progress by 2030, encompassing emissions, biodiversity and water quality. The Strategy signals actions aimed at making the sector more diversified, resilient and based on circular economy principles. It proposes expansion in nature-based production systems, tillage, horticulture and organic production. But the core of Ireland's agri-food output will continue to be grass based livestock production wherein lies Ireland's natural competitive advantage. Given that 80-90% of output is exported, the long-standing policy of supplying an increasingly diversified range of export markets and developing new high value markets will continue. The aim is to secure a premium price for as high a percentage as possible of Irish output and ensure that this premium is shared across the value chain, in particular back to the primary producer.

In aiming to become an international leader in SFSs, a consistent policy framework and a culture of continuous improvement across all the actors in the food chain will be required. A number of other countries also aspire to leadership in this field. There is currently no internationally recognised index of what constitutes a SFS. Ireland should propose the development of such an index, possibly by FAO, and should contribute its ideas and experience of monitoring and implementing this Strategy to develop the index.

Policy Coherence

The interconnectedness of policies for food, health, climate and the environment in addressing the great global challenges is clear and has come into increasing focus at international level.. The Strategy proposes that this should be recognised within national policy, through using a food systems approach, which is an innovation by comparison to previous agri-food strategies. There is a need for policy coherence between food, climate and environment; food and health; and between domestic and foreign/development cooperation policy. This will involve challenges of political and policy coordination and require new structures and ways of working. While there are synergies, equally there will have to be trade-offs and compromises.

The impacts of food systems on climate, natural resources and biodiversity must be significantly reduced. Climate change and a compromised natural environment threaten food production and are already having significant impacts on agricultural production. Future scenario planning must take account of the possibility of systemic risks over the next decade, including preparedness for other pandemics and threats to regional and global food security due to climate change.

Producing food in a manner that does not cause pollution and harm to ecosystems is essential for the sector, both ethically and reputationally, and the Strategy takes a systematic approach to addressing this. Previous agri-food strategies, particularly Food Wise 2025, have highlighted the importance of environmental sustainability but this Strategy brings it to a new level of centrality and commitment. Given the structure of Ireland's economy, the agri food sector is a major contributor to GHG emissions, and the principal source of national ammonia emissions. The EPA's Integrated Assessment for 2020, "Ireland's Environment", points to the challenging trends in emissions, biodiversity and water quality indicators. Mission 1 outlines urgent measures to address these issues, adopting ambitious 2030 targets for emissions, sequestration, air and water quality and biodiversity. Achievement of these targets will be a critical milestone on the road to delivering a climate neutral food sector by 2050.

The Strategy suggests that the issue of food and health should be brought to a new level of political and policy importance. After the COVID-19 pandemic has abated, a national conversation should begin about securing the nation's future health. This will require both a whole-of-government and a whole-of-society approach. Citizens, consumers, the different parts of the agri-food sector, city and national governance structures, must all see they can be part of a vision to deliver on improved food systems and what role each of them can play. Mission 3 proposes improved policy coherence for food, nutrition and health through the establishment of a high-level implementation group co-chaired by the Department of Health and the Department Agriculture, Food and the Marine. There is already a substantial agenda where the work of the two Departments overlap, including aspects of Healthy Ireland, the National Obesity Strategy and One Health. This platform of cooperation should be built upon with an enhanced collaborative agenda.

The changing societal expectations for the sector are also addressed in Mission 3. The Strategy brings renewed emphasis to the importance of enhancing consumer trust and meeting those expectations, providing evidence of a safe, authentic and ethically produced food supply. Consumers and society need assurances that food derived from animals is based on high standards of animal health and animal welfare. This Strategy endorses the 'One Health One Welfare' approach, recognising the strong linkages between human, animal and environmental health.

A further innovation in this Strategy is the linkage between the domestic policy on SFSs and Ireland's foreign and development cooperation policies in Mission 4. Improving the food and nutrition security of the world's poorest people has been central to Ireland's development cooperation policy since its inception in the mid-1970s. This commitment will continue but will now be framed within the promotion of sustainable food systems, which is central to the updated development cooperation policy set out in 'A Better World' (2019). Ireland's transformation of its own agri-food and rural sector, as well as its practice of developing ten-year strategies using an inclusive multi-stakeholder basis, is of interest to a wide range of countries, particularly in Africa.

Sustainability - Economic, Environmental, Social

The pressure on the agri-food sector to deliver sustainability comes from a powerful combination of changing societal demands, consumer behaviour, political decisions, and the requirements of major trade customers for Irish food and drink. In addition, there is an increased focus on our legal and social responsibilities to care for the environment for future generations, and an improved understanding of how fundamental a healthy environment is for producing healthy and nutritious food.

The three components are not compartmentalised and there is an important interplay between them: working towards each dimension of sustainability draws on policies across the four Missions. The Strategy recognises that economically viable farmers, fishers and forest owners are an integral part of the rural and coastal community and that healthy environments, ecosystems, communities and economies go hand in hand. It recommends policies to facilitate them to see themselves as producers of high quality, safe food and fibre, but also as providers of ecosystem services, through for example capturing carbon, cutting ammonia, supporting biodiversity, and managing water resources. These in turn contribute to social sustainability. More needs to be done at EU and national level to agree the policy instruments and incentive structures to support these policies.

In moving towards sustainability becoming more embedded in the agri-food system, the issue of policy sequencing, timeframes for implementing policy change, and the use of the Just Transition approach will be important. Just Transition acknowledges that in moving to a climate resilient and low carbon sector, policy should seek to minimize the hardships for workers and their communities. There are trade-offs between the different dimensions of sustainability: these need to be acknowledged and a willingness shown to reach realistic compromises on the direction of change and the speed at which it can take place. This Strategy sets out the agenda from which such choices and decisions can be made.

(i) Economic Sustainability

The future economic sustainability of the agri-food sector requires a continuing supportive EU and national policy framework and investment. Primary producers' economic sustainability is crucial not only in terms of their ability to make a decent livelihood and return for their endeavours, but also in helping to deliver on environmental and social sustainability. Looking to the next decade, moves to secure economic sustainability are developing around five main themes: increasing competitiveness and profitability; sustainability as the basis for competitive advantage; adding value to Ireland's food and drink offering; a more equitable distribution of value in the food chain; and broadening income sources for household viability within a more diversified and resilient sector. These are the focus of Mission 2. Strong EU supports through the Common Agriculture Policy and the Common Fisheries Policy are essential. Higher standards add to the cost of production and consideration will be needed as to where the burden of these costs will lie, as it is clear that primary producers alone cannot be expected to bear this cost.

The Seafood sector will continue on a path of sustainable economic and environmental development by carefully managing the utilisation of sea-fisheries and aquaculture. The EU-UK Cooperation Trade Agreement (TCA) will have a particularly significant impact on the sector. The Minister for Agriculture, Food and the Marine has set up a Task Force to examine the implications arising from the TCA for the sector and the coastal communities who depend on it.

Increasing competitiveness and profitability

Mission 2 focuses on the areas which offer the best tools for improving economic viability and resilience of primary producers; both by their own actions and initiatives within the agri-food sector as a whole. Farmers can bolster their financial and economic sustainability by focusing on efficiencies; embracing new,

diversified systems of agriculture; meeting standards required for greater premiumisation that can offer higher market returns; and being rewarded for the delivery of a range of eco-system services.

A common theme across the Missions is the need to work towards a more resilient and diversified system, capable of coping with the risks associated with changes in economic and climatic circumstances. While grass-based production of milk, beef and sheep will continue to account for the dominant part of agrifood output, the Strategy proposes there should be better integration within the sector, including dairy/beef and dairy/tillage linkages. The Strategy proposes expansion in tillage, horticulture, organic farming and agro-forestry, as well as a plan to reduce Ireland's dependence on imported protein crops.

This Mission also envisages there being a place in Ireland's agri-food sector for all types of primary producer, whether full time or part time, big or small. A diversity of farming, fishing and forestry systems offers the best approach towards achieving all forms of sustainability and one should not be considered better than the others.

Sustainability as a source of competitive advantage

Systems of food production, processing, packaging, distribution and logistics that contribute to environmental degradation are no longer ethically acceptable to society or consumers. An increasing number of global brands, some of whom are customers of Irish food and drink, are placing their sustainability credentials front and centre as the next source of competitive advantage. Ireland has built a strong reputation for sustainable food by having the world's only national food and drink sustainability programme - Origin Green.

The Strategy signals that Origin Green now needs to adapt to a higher level of environmental ambition and to achieve 'stretch targets' with participants. Bord Bia and Teagasc are collaborating to support the reduction of agricultural emissions, drawing on the respective strengths of both agencies to reduce the negative environmental impact of agricultural production and assure Ireland's reputation as a source of sustainable food production. A key element to the partnership will be promoting a coordinated approach to communications on sustainability to support farmers reduce their on-farm emissions and the roll out of the Teagasc SignPost Farms will be an important element in this. Other actors – knowledge exchange practitioners, research institutions, State Agencies and NGOs – will also need to collaborate on ways through which our environmental ambitions can be realised.

The long-term policy of export market diversification, with ongoing comprehensive efforts to access and develop priority markets for Irish food and drink exports, will continue. Arising from Brexit, the UK is likely to open up its market for food through a set of new trade agreements which could impact on UK price levels, particularly during the second half of the decade. An important feature in Ireland maintaining its strong market position in the UK in the face of this increased competition will be around building on its reputation for providing safe, sustainable, and high-quality food.

Adding value to Ireland's food and drink offering

OECD/FAO projections suggest that the long-term trend of stable or a slight reduction in the real price of food will continue over the next decade. The Strategy takes the position that being able to demonstrate that Ireland has high standards of sustainability offers the best approach for seeking a price premium and/or enhanced market share. It suggests that the customers of Ireland's food and drink (retailers, the food service sector and consumers) should play their part in helping the sector become more sustainable.

Insight, innovation and product differentiation and developing opportunities at home and abroad are further important elements in adding value.

The Strategy acknowledges that there is a need for a wider public discussion on the role of food in society. Part of this discussion should be the price people are willing to pay for food produced to high standards, as well as the relative affordability of nutritious foods compared to less healthy choices. There is increasing demand for natural, sustainably produced food and a strong growth in the sales of milk and meat alternatives, based on consumer demand for vegan or 'flexitarian' choices and recognition of the importance of fruit and vegetables in a healthy diet. There is also a lively debate, nationally and internationally, about the role of animal-sourced foods in diets. The Strategy contributes to this debate, with a statement on the value of animal-sourced foods in diets for children, adolescents and adults.

A more equitable distribution of value in the food system.

Many primary producers do not see the prices they receive for their products improve as they are being asked to meet higher environmental standards with associated increased costs. Improving price transparency is one method of possibly improving prices to primary producers. The Unfair Trading Practice Directive (UTP) will be transposed into law before 1 May 2021 and the target is that the National Food Ombudsman office (title tbc) will be established on an interim basis by the end of 2021 (primary legislation, which is being prepared, will be required to make it permanent). There is a relatively low uptake of Producer Organisations and use of Geographical Indicators in Ireland, and the Strategy proposes some actions on addressing these. In addition, quality assurance schemes and new forms of producer-processor contracts have potential to improve value creation and distribution in the supply chain and the Strategy outlines actions relating to these.

Broadening income sources for farm household viability within a more diversified and resilient sector

The Strategy outlines likely additional on-farm and off-farm income sources to support farm household viability. Future income sources could range from the market for food products, to payment for carbon sequestration and storage, microgeneration of energy, protecting habitats and species, and providing other ecosystem services. While afforestation is experiencing some challenges currently, it offers an added income stream for farmers, along with other options such as organic farming, horticultural production, contract rearing of livestock, eco-tourism, amongst others. Fishers can continue on a path of sustainable economic development by managing the utilisation of sea-fisheries and aquaculture, and expanding and investing in technology to develop the industry and improve productivity. The Strategy proposes more targeted agri-environmental schemes under the next CAP Strategic Plan to protect Ireland's habitats and species. These schemes should include results-based actions, including payments for specific measures, drawing on the lessons from the European Innovation Partnerships. Consideration should be given to the development of a dedicated programme for High Nature Value (HNV) farmland and to the concept of 'Regenerative Agriculture', particularly under Irish conditions, with an emphasis on improving the health and multifunctionality of soils.

Carbon-farming offers a potentially new source of income for farmers but it is still in the early stages of development. The Ag-Climatise Roadmap proposes a pilot scheme for on-farm carbon trading to reward farmers for the public goods they are providing. This should align with the proposed EU Carbon Farming Initiative as set out in the Farm to Fork (F2F) Strategy, whereby a new regulatory framework for certifying carbon removals will underpin a payment to farmers. In addition to public funding, multiple sources of finance will be required, including from the private sector.

The Strategy proposes the scale-up of renewable energy (RE) sources, especially anaerobic digestion, solar and energy efficiency. The roll-out in 2021 of an enabling framework for micro-generation which tackles existing barriers and establishes suitable supports, as foreseen in the Climate Action Plan 2019, will be crucial to the delivery of this action.

There is scope for additional income and employment opportunities arising from embedding the agri-food sector in the circular bioeconomy. These opportunities can come from the use of raw materials from grassland, crops, forestry and bio-marine systems to develop new bio-based value chains.

Ireland's new rural development policy will also be an important factor in determining the range of income and employment opportunities for farm households and the wider rural community. This plan will address key policy challenges and offer solutions on issues affecting rural areas, including the crucially important issue of broadband availability.

(ii) Environmental Sustainability

Irish environmental policy has undergone a major reset since 2019, due to greater ambition at national level, expressed in the 2020 Programme for Government (PfG) and by the European Green Deal (EGD) at EU level. The Government has set a target of climate neutrality by 2050. It will move towards an intermediate target for 2030 through the establishment of 5-year sectoral carbon budgets provided for in the Climate Action Amendment Bill.

The Strategy has adopted the objective of achieving a climate-neutral food system by 2050, with verifiable progress achieved by 2030, encompassing emissions, biodiversity and water quality, as well as a range of other targets for forestry, fisheries, organic farming and food waste. The target for climate-neutrality by 2050 fits with the overall national target but also with the targets set by other major food exporting countries for their agri-food sectors. The Strategy envisions a short, medium and longer-term perspective towards attaining climate neutrality by 2050.

Mission 1 outlines a range of actions aimed at urgently tackling existing environmental problems. AgClimatise, based on an extensive consultation process with stakeholders from industry, research, policy, farmers and environmental groups, was published in December 2020. It includes 29 actions, largely based on evidence from Marginal Abatement Cost Curves, that aim to reduce the sector's environmental footprint. It represents a foundation stone upon which the additional measures in this Strategy will build and will be updated on a regular basis.

Working towards these 2030 targets will be done through a number of existing and planned initiatives and milestones. These include the Agricultural Sustainability Support and Advice Programme (AASAP); Dairy Sustainability Ireland (the first 'whole of sector/whole of government' approach to addressing the challenges of the industry) and the establishment of the Teagasc 'Signpost Farm Programme' which will guide farmers on how to implement many of the actions in AgClimatise. The outcome of the review of the Nitrates Directive in 2021 will be an important input towards achieving the 2030 targets.

Working towards a climate—neutral food sector by 2050 will be done within the framework of the five-yearly sectoral budgets provided for under the auspices of the Climate Action and Low Carbon Development Bill, to be decided during 2021. In advance of these decisions, the Strategy cannot propose a detailed plan for the delivery of a climate- neutral sector by 2050, but it can indicate certain parameters, policy directions and milestones.

AgClimatise makes clear that an increase in the national cattle herd above current levels will jeopardise the achievement of the sector attaining climate neutrality by 2050. Therefore it is proposed that under the auspices of the 2030 process, detailed plans to manage the sustainable environmental footprint of the dairy and the beef sectors will be produced by Q2 2022. This will take into account of their respective environmental footprints; the plans for reduction in total methane, nitrous oxide and ammonia emissions; the impact of management practices and existing technologies at farm level, as well as emerging methane and ammonia mitigation technologies; the promotion of better pasture management, including reducing chemical fertiliser use; increasing clover and multi-species pasture swards; genetics and feed additives.

The Strategy makes other recommendations. These include the development of a National Soils Strategy that will assess all appropriate soil health parameters and inform future policies on good soil management practices; conducting biodiversity studies to inform future policy development and measure progress; conducting a national land use review and the development of a 50-year vision on sustainable land use, land cover and land management including farmland, forests and peatlands; targeted agri-environmental schemes under the next CAP to protect and enhance Ireland's habitats and species; the development of a new Forestry Strategy; an examination of the option of afforestation on state owned lands, building on initiatives from Coillte and Bord na Mona. Actions are proposed to develop an all-of-value National Food Waste Prevention Roadmap with clear national and sectoral targets for 2030.

The range of agri-environmental measures proposed in the Strategy represent a statement on the important role the agri-food sector can play in living up to expectations on the environmental commitments. The Strategy envisages a pathway through which primary producers can assume a broader role in responding to the climate and biodiversity emergency, not only producing nutritious high quality food, but also becoming providers of a range of other eco-system services, for which they will be financially rewarded based on delivery. It is hoped that the vision and commitments in the Strategy will enable farming, seafood, forestry and environmental groups to see a commonality of interests and provide a basis to work together on an agreed agenda for the future.

(iii) Social Sustainability

Social sustainability in the agri-food sector can often be over-looked. There is a direct connection between the social vibrancy of rural and coastal communities, the commercial and environmental performance of the primary producers, and those connected in upstream and downstream activities, particularly the food and drink industry. Many communities have used a bottom-up approach to development and re-generation, and have harnessed local leadership and resources, and innovation and technology to increase income and employment opportunities.

There are a multitude of factors that could be considered as influencing and driving social sustainability, but this Strategy has focused on a number of key ones which are highly relevant to the agri-food sector.

Appropriate measurement of social sustainability is a pre-requisite and recommendations are made on how to improve measurement and reporting. Generational renewal and the importance of encouraging and facilitating new entrants to farming, fishing and forestry is highlighted. The Strategy supports an enhanced role for women in the sector and recommends the establishment of female farmers' networks and other supports to better understand and meet the needs of Irish women farmers, fishers and rural female entrepreneurs. The Strategy calls for continuous updating of education and training programmes to meet the changing needs of the sector and emphasises the importance of lifelong and peer-to-peer learning.

The number of injuries and accidental deaths in farming and fishing is unacceptable and there must be greater emphasis on occupational safety. The Strategy proposes the introduction of mandatory health and safety skills training for all those working on farms and enhanced training for fishers. There are continuing problems of rural isolation and mental health and well-being. The COVID-19 crisis has shown many examples of community solidarity but as Irish rural society emerges from this crisis, more systematic attention needs to be paid to the underlying challenges of rural isolation and mental health. Associated with this is the need for LGBTI+ inclusivity, strong rural development policies and new community engagement initiatives, as well as the rapid roll out of high-speed rural broadband.

Social sustainability can also be said to encompass other concepts explored in then strategy such as food & climate, food & health and consumer trust in the food system, including food authenticity and safe & ethical production.

The Innovation and Technologically Driven Future

Innovation is fundamental to achieving sustainability in all its forms. Ireland's agri-food sector has been making good progress in embracing technology and innovation in recent years. In the period to 2030, a wide range of new digital innovations and data capture and analysis techniques will emerge. These will change the way we manage our natural assets; produce, process and distribute food and its by-products and residues; and improve transparency along the food chain. The sector stands on the cusp of being able to utilise these technologies, data and innovation to enable the new sustainability improvements that are required and to capture and share their impact.

The Strategy recommends a new approach to innovation by moving to a challenge-focused agri-food innovation system that will deliver increased cohesion of public and private actors and deliver on the vision of Ireland as a global leader of innovation for sustainable food and agriculture systems. In addition, it sets out a strategic approach to funding for R, D and I, as well as developing a dynamic knowledge exchange environment which can help to transfer research findings and innovations to practical implementation on farms and in agri-food and seafood businesses. The Strategy also makes recommendations in the areas of competitiveness and resilience and the crucially important enabler of attracting and nurturing diverse and inclusive talent. These will be critical to facilitating the other Missions and Goals in the Strategy.

Key external partners and audiences

The Strategy's primary role is to provide a vision and associated policies for the sector for the coming decade. But it also has an important role in communicating an Irish vision and commitments to key audiences at EU, UK and international level, and to the major customers for Irish food and drink. The Strategy can be of particular value in supporting the Irish position at the major EU and international decision making fora over the coming years. Ireland should seek to carve out a thought, policy and practice leadership role, at European and international level, for a number of issues where it has the credibility and capability to play such a role.

EU collaboration

Over the past decades the EU's CAP has been the major focus for Ireland's agri-food sector. It has been a major source of income support and has evolved to broaden its scope to food safety, rural development, and animal welfare. It has contributed to the restructuring of the food industry, enhancing its capacity to add value and develop new markets. The new stage in the CAP's evolution will have noticeably higher

environmental ambition with national Strategic Plans focusing on economic, environmental and social goals across nine key objectives.

While the CAP will continue to be of crucial importance, the sector will be influenced by, and should benefit from, a wider range of EU policies over the coming decade. The European Green Deal (EGD) represents a fundamental political and policy commitment towards Europe becoming the first climate-neutral continent by 2050. The Farm to Fork (F2F) is at the heart of the EGD: it addresses the links between healthy people, healthy societies and a healthy planet. The F2F, Circular Economy and Biodiversity Strategies, taken together, will require substantial change in how we farm and fish, manage our forests and how we process, distribute and consume food and bio-based products. While the Strategy supports the direction of these policies, Ireland will need to proactively engage to influence the direction of the implementing regulations under each of these initiatives, to take account of national circumstances and legitimate interests and concerns. In addition, detailed impact assessments will need to take place.

Opportunities for the sector should also be available in two other important EU policy areas. First, the Horizon Europe Research and Innovation Programme has identified five areas –'Moonshot Missions' – where much of EU research funding will be directed up to 2030. Three of these relate directly to the agrifood sector – healthy oceans; a climate resilient Europe; and soil health and food. Second, the EU has prioritised a deeper partnership with Africa as a key element of its foreign policy. The next African Union (AU)-EU Summit will agree the basis for a comprehensive strategy between Africa and Europe. Ireland should advocate that a key element of that strategy will be the sustainable development of Africa's agrifood sector and rural economy.

UK collaboration

This Strategy envisages Irish agri-food protecting and building on its strong position within the British market for key food and drink exports, while recognising that the market is likely to become more competitive as the UK secures more trade agreements over the coming years. The long-term policy of reducing dependence on the UK market and increasing trade diversification will continue, but the unique position of the UK market for the Irish agri-food sector will remain. The sector can be part of the agenda for deepening the bilateral relationship between Ireland and the UK in the post-Brexit era: the nature of that engagement should be explored in the light of this Strategy and the outcomes of the review of UK food policy currently underway and expected to be completed during 2021.

The special status of Northern Ireland, resulting from the Ireland/Northern Ireland Protocol of the UK/EU Withdrawal Agreement, offers a number of possibilities for increased cooperation on an all-island basis, subject to political will. There could also be scope for additional novel forms of collaboration, involving the UK and Irish governments and the EU, on some of the EU's Moonshot Missions such as soil health and food.

International collaboration

Ireland is a pioneer in developing a national agri-food strategy using a food systems approach. Many other countries will be interested both in the multi-stakeholder process to develop the Strategy and in the content and implementation of the Strategy itself. The Strategy will provide a coherent policy framework for Ireland to make an important contribution to the international discussion taking place on food systems over the coming years, and in particular at four major international meetings occurring during 2021: the UN Biodiversity Conference (CBD COP 15); the Food Systems Summit (FSS); COP-26 on Climate; and the Nutrition for Growth (N4G) Summit. A probable outcome of these meetings will be a greater prioritisation, at national and international level, of using a sustainable food system approach in future planning.

In its contributions to these meetings, Ireland will not present itself as a paragon of virtue: it has work to do to improve its own performance in sustainability, and every country has its own unique local circumstances to consider so what works in one country may not work in another. But in committing to this Strategy as a pathway to achieve such improvement, Ireland aims to become a thought, policy and practice leader in SFSs. If such a leadership position can be attained, particularly at the Food Systems Summit in September 2021, this could provide the basis for a continuing leadership role during the coming decade. It is also likely to open opportunities for international collaboration, with Ireland becoming a leading supplier of policy advice and services to countries adopting their own SFSs, particularly in Africa.