

The relationship between climate change and agriculture is a contentious, complex and important one. In this series of thirteen blogs, UCD Adjunct Professor Frank Convery will explore the context, challenges and potential solutions for dairy, beef and sheep farming in Ireland. Each blog presents key evidence to underpin informed debate and the series seeks to help plot a sustainable future for the sector.

Responses are invited via [earth.institute@ucd.ie](mailto:earth.institute@ucd.ie) and the UCD Earth Institute will host a workshop in association with the UCD School of Agriculture and Food Science and the National Economic and Social Council at the end of the series to discuss the evidence and its implications.

**Professor Eoin O'Neill, Director, UCD Earth Institute**

## 13. Climate Performance by Irish Ruminant Farming: What Farmers Need

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### Introduction

Learning by doing is the best kind of learning; learning from those who are already doing is the second-best kind of learning.

In his *Farmers Journal* editorial on October 18, 2023, Jack Kennedy reports on a visit by a high-level industry group to Ohio Texas and Wisconsin to “experience the cutting edge of American beef and dairy farming which included visits with USDA experts, industry leaders and talk to farmers on the ground”. The group learned about the rapid and accelerating on-farm gains in commercial productivity in terms of breeding, feed, technology, genetics etc. He concludes that ‘Black and white animals will soon produce Jersey type milk yields.’ And that “Irish farming cannot be just another part of the food chain. It needs an edge, or it doesn’t survive.” [Hoodwinking farmers won’t wash long term - 18 October 2023 Premium \(farmersjournal.ie\)](#).

In the same issue of the journal, Stephen Robb has an excellent piece – ‘Denmark – the biomethane pioneer’ – on how today 33% of all animal slurry is processed through anaerobic digestion, farmers are paid: €3.5 per tonne of manure supplied; the current rate for gas fed into the gas supply network; and also receive additional green certificates. He features a case study which is co-owned by an Irish company – [DCC Energy Denmark – the biomethane pioneers - 18 October 2023 Premium \(farmersjournal.ie\)](#).

This blog is in the same spirit, except that I focus on what economists call the ‘public goods’ produced by farming – greenhouse gas emissions’ reduction and carbon storage (reducing leaks and removing carbon with vegetation and soils), better water quality, restoration of nature’s vitality etc. My core conclusions are as follows: to use Kennedy’s language, a key edge that Irish farming already has in some markets is the willingness of some customers to pay premium prices for Irish products; holding onto premium customers will be at risk unless Irish farming matches the climate performance outcomes of its competitors in key export markets.

**Bottom line**

Just as there is a productivity revolution underway on the commercial side, there is a comparable revolution underway in key markets on the delivery of public goods in key markets. This will be epitomized by the emergence of credible carbon footprint information for consumers both informing them on the climate performance of the food companies they are buying from, and the products they are choosing to put into their basket. For premium consumers, their governments and companies, this information will shape their choices. You need new policies if you are to deliver a carbon footprint that is competitive in these markets, and you will have to fight for them.

At a minimum, holding onto this market premium, and ideally growing the numbers willing to pay it, is a core commercial responsibility for the sector. I checked the Walmart (the largest grocer in the US) website on October 21, 2023 ([kerrygold butter - Walmart.com](#)) I saw that: Kerrygold (salted, 8 oz, 2 butter sticks) was selling for **54.8 cents per oz**, while the dominant butter supplier to the US market (Land O Lakes) was offering its 1 lb pack (salted 4 butter sticks) for **39.3 cents per oz**. [land o lakes butter - Walmart.com](#) – that is what a premium looks like. Just as there is a revolution underway in the US on the commercial production side flagged by Kennedy, there is a parallel movement underway in the US on the public goods side, by: *government*; started in California (which supplies 19% of the country's milk) – since 2015 farmers have been helped to reduce emissions at scale and since 2022 support has been Federalized., which also includes funding for innovation and credible metrics for consumers so they understand the carbon footprint of the food they are buying; *companies*: (Walmart' gigaton challenge); *financial institutions* (loan and investment support for climate responsible companies). This pattern is being replicated in our other key markets – the UK and EU.

## Audience

I have written a series of evidence based blogs on climate policy for ruminant farming in Ireland – available free at: [Climate Policy for Ruminant Agriculture in Ireland blog | UCD Earth Institute](#) of which this – Blog 13 – is the last.

This blog's audience are: Irish dairy beef and sheep farmers who: want to protect and expand their premium customer markets; get an aggressively negative media off their backs, create a farm business that will be attractive to successors of talent and ambition; are interested in accessing credible data that informs how their climate and environmental performance shapes their achievement of these ambitions; know more about the policies needed to ensure that they can do so; are willing to fight to secure the delivery of these policies.

I wrote these blogs mainly because of the very poor quality of the public debate, which I deplore for few reasons, but especially because there is a lot of credible and high-quality data publicly available, but typically ignored. Some credible information not in the public domain was made available to me which I did not use because I wanted readers to be able at a click to see the evidence on which my conclusions rested. Also, most of the debate continues to focus on the local Irish scene when most of the relevant action is happening elsewhere. If such parochialism continues to dominate, it will prove to be very costly to you.

## Structure

The paper is organized into six sections:

1. Why an Evidence-Based Blog Series
2. Progress
3. Carbon Footprint Competition
4. Action with Existing Policies
5. Need for New Policies
6. Action needed to deliver these policies.

A few key findings are presented under 'Summary' and the evidence underpinning these findings are presented in 'Evidence'.

## Summary

**Note:** These are brief. Most of the evidence on which they are based is provided later.

### A. Why an Evidence-Based Blog Series

**Andy Grove – only the paranoid survive:** Grove was CEO and then chair of Intel. His paranoia was about what his competition were up to, how emerging technologies and policy decisions could destroy his business and how essential real information in real time was to ensure that he adapted in time.

**Climate Change is a strategic inflection point for Irish farming:** This is the term Grove used to characterise a change 'out there' that told him that unless he adapted smartly and quickly, his business would be seriously threatened.

**Poor Quality of the Public Debate:** A triad from 9<sup>th</sup> century Ireland tells us that: "The three doors by which falsehood enters: anger in stating a case: shaky information, evidence from bad memory". The public debate on climate policy for farming has all three: anger is a predominant feature of a lot of the discourse, shaky information is everywhere, and bad memory pervades. As regards the latter, I seem be the only one who publicly mentions the decision of Judge Marilyn Huff, who found in favour of Ornuá (see below) or the commitment given in Foodwise in 2015: "Environmental protection and economic competitiveness are equal and complementary: one will not be achieved at the expense of the other."

**The Importance of Winning Court Cases:** Ornuá successfully defended its grass-fed claims for Kerrygold products against a class action suit in a California court; as every Irish dairy farmer knows, Judge Marilyn Huff found in its favour on February 3, 2019, based mainly on the quality and timeliness of the evidence it produced in support of its case.

**You need it to give parity of esteem to the climate and environmental performance of your farm and your food processor:** In 2013, Teagasc began to report on these aspects. You need to have credible evidence on your performance that is comparable to your commercial information and know how you compare with average for your farming system and how well the coop or company you are supplying is doing. It is an uncomfortable truth that you and your food processor are partners in this respect and, on this issue, you both need to act accordingly.

### B. Progress

Beginning with the Teagasc work in 2013, there has been a lot of progress on metrics, research and development, farmer action (Signpost), policy [beginning in 2014 with the Green Low Carbon Agri-Environment Scheme (GLAS)] and activity at dairy co-op and food company level. But policy has not been sufficiently focussed on rewarding performance at scale or providing a mission-focussed innovation strategy to widen the choices and reduce the costs of emissions reduction and carbon removal at scale. To get to where you need to be, you need new policies (see E below).

### C. Carbon Footprint Competition

Your commercial future will be determined not in Ireland, but by the decisions of consumers, companies, governments, and farmers in your four key markets totalling ~78% by value in 2022 – EU (41.5%), UK (25.7%), US (6.6%), China (4.3%). Carbon Footprint aims to tell the world how much CO<sub>2</sub>e was emitted to produce a unit of product. [Imagine a consumer in Sacramento California asking themselves as he/she makes a butter-purchase choice: How many kgs of CO<sub>2</sub>e were emitted to get this ½ lb to me?]

In the case of food, this will be in the form of Kgs CO<sub>2</sub>e/Kg of product. In your top three markets (EU, UK, US), there are parallel efforts by government to: standardize how footprint is measured, reported and displayed and these could be different in all three; support farmers generously to reduce their net emissions at scale and improve their footprint. Companies are also acting unilaterally on this front. If their policies are smarter and faster than ours, they will deliver lower footprints than ours, and this will have consequences, especially with premium customers. A few straws in the wind:

In the EU, since 2018 French farmers have had access to a programme ('Label Bas Carbone') which provides them with direct support per unit of emissions reduced and/or stored; Denmark has developed a model ('Climate label on Food Products') which proposes (on a voluntary basis) to do what it says on the tin – provide consumers with a carbon performance metric on the food on their supermarket shelves; there are claims from Flanders that its dairy sector is the most carbon efficient in the EU. In the US, the Federal government is providing up to \$20 billion of 'climate smart' funding to its farmers improve their climate performance, and a parallel wave of funding to support innovation; the UK has launched the Food Data Transparency Partnership (FDTP) to develop a standardised approach for food and drink businesses to measure and communicate scope 3 (farm based) greenhouse gas emissions via a mandatory methodology for producing voluntary eco-labels

A worst-case scenario is that the US and the UK begin to penalize food imports that do not meet a low carbon footprint, and some Irish food products struggles to compete.

### D. Action with Existing policies

The portfolio of supports already in place, and the growing amount of practical knowledge to draw on, means that, if you have not already done so, there is a basis for progress, and you need to act on it now. This is important: time is not on your side, and learning by doing is the best learning of all. We all know the truth of Mohammad Ali's observation: "The fight is won or lost far away from the witnesses-beyond the lines, in the gym and out on the road, long before the dance under those lights." Long before you are in the ring, in order to compete successfully, you must invest early and do so wisely.

1. **No Regrets:** Some of this investment will pay for itself in the sense that it will reduce your costs commensurately and/or increase your revenues by expanding the number of premium customers.
2. **Investing to protect Derogation is essential:** If you are a derogation farmer, this investment is essential if you are to avoid reduction in your derogation from 220 Kg/Ha to 170 Kg/Ha and if you fail to do so, this will increase your costs.

While investment support at scale is essential to deliver carbon competitiveness, the payoff to some of the investment will be so long deferred that you will need help; this is where the right policy support is essential and also policy can help reduce what economists call the 'free rider' problem, i.e., those who are happy to garner the benefits of a competitive carbon footprint, but happy to let others do the heavy lifting to deliver it.

### E. You need new policies.

1. **The existing mix helps but not enough:** From 2014, a CAP expenditure stream – the Green Low Carbon Agri-Environment Scheme (GLAS) – was included in the Pillar 2 (Rural Development) strand of the CAP 2014–2020. This expenditure (€1.54 billion) was mainly taken up by relatively low-income beef and sheep farmers; as such, together with the income provided under Pillar 2 for 'Payments to **International Competition and Your Carbon Footprint** areas facing natural or other specific constraints' these payments inter alia were a crucially important source of income support. However, in spite of its 'low carbon' label, they did little to reduce emissions or store carbon. This programme's successor in CAP 2023–2027 – Agric-Climate Rural Environment Scheme (ACRES) – is an improvement, but will fail to come close to delivering the carbon footprint you need to be competitive with premium customers See Blog 10 CAP 2023–2027 [Climate Policy for Ruminant Agriculture in Ireland blog 10 | UCD Earth Institute](#) for more on this.
2. **What you need:** The only way to deliver the carbon footprint you need is if policies:

- Reward emissions reduction and removal at scale – pay for performance, and/or penalize non-performance.
- Provide an innovation system that finds and delivers new better and lower cost ways of reducing emissions and storing carbon for *grass-fed* systems. Most of the innovation I have seen emerging favours indoor containment systems.

This will require new policy instruments and new money.

### 3. Geography is Important:

There is considerable complementarity between reducing greenhouse gas emissions and nitrate emissions, so a focus on key catchments and reducing both gasses at scale therein makes sense, as does a focus on farmers influencing outcomes in Natura 2000 sites.

- Key River Catchments: We all know that the Maigue Deel, Bandon, Slaney, Blackwater, Suir, Nore, Barrow, Slaney, and Boyne catchments have failed the key 6-word derogation condition under the Nitrates Directive – "will not contribute to higher pollution." Farmers in the catchments who collectively reverse this decline should at a minimum be rewarded by being allowed to hold onto their new derogation rate.

- Natura 2000: The land and inland water within these areas covers roughly 29% of the country. See [ie - Land Use Review – Phase 1 \(www.gov.ie\)](#). Figure 3.1 page 83.[1] Strategic investment that reverses decline in the vitality of nature in some and restores losses in others would be a signature contribution, and go far towards meeting the Nature Restoration obligation to “cover at least 20 % of the EU’s land and 20 % sea areas by 2030, and all ecosystems in need of restoration by 2050” [Council reaches agreement on the nature restoration law - Consilium \(europa.eu\)](#).
- Value for Money: The support package needs to be committed over at least a 10-year period, and generous enough to be attractive to most farmers, and also satisfy those paying (mainly tax payers) that it is value for money for them, and sustainable over a long period.

## **F. Towards Securing the Policy Changes that you need**

There is nobody in the public domain vigorously, effectively and persistently making the case for you that (a) competitors for premium customers in key markets are gearing up with smart and well-funded policies to win over climate aware premium customers, companies and investors and finance providers (b) derogation farmers are facing a further rise in their costs unless they find ways to reduce nitrates emissions at scale (c) Ireland’s current policy mix will not deliver either (c) new policies that maximize the prospects of competing successfully are needed

We know the shape that such policies need to have if you are to succeed: go to where the problems are; pay for performance with the focus on delivering value for money; support an innovation strategy that will find new, better and cheaper ways to reduce emissions and remove carbon at scale from grass-fed systems and help create new ones.

**Unless you demand it, the policy change you need will not happen.**

The policies you need are not in place because you and your fellow-farmers who need them have not organized to demand them. Farm organizations respond to membership demand, and their members have not demanded this policy change. A different model is evident in the US, where the Food and Agriculture Climate Alliance (FACA) co-chaired by Zippy Duvall President, American Farm Bureau Federation secured ~\$20 billion for farmers for climate smart action in the Inflation Reduction Act signed into law by President Biden in July 2022 [Food and Agriculture Climate Alliance Outlines Policy Recommendations \(agnetwest.com\)](#).

The stakes for you and your family couldn’t be higher: If you and your coop/company match what the best has to offer in key markets, you will hold onto your premium customers, and probably increase their number. If you do not, your access to these markets will shrink; you and your coop or food company will be selling increasingly into lower value commodity markets. If you are a derogation farmer, operating in one of the 9 nitrates-challenged catchments, if you and fellow-farmers fail to reduce nitrate pollution at scale, at the next assessment, you are likely to lose the 220 Kg/Hectare derogation, and this which will increase your costs.

You need to (a) proactively and positively engage with these agendas and (b) ensure that the Irish policy system helps you and Irish farmers deliver what it takes to make the transition to Food Vision 2030 ambition for you – ‘a global leader in sustainable Food Systems’.

To succeed, the policy system must deliver:

- Pay for performance at scale and/or penalize non-performance.
- An innovation system that finds and delivers new better and lower cost ways of reducing emissions, storing carbon for grass-fed systems.

This will require new policy instruments and new money.

## **Actions**

“Skate to where the puck is going, not where it’s been.” So spoke Wayne Gretzky, a Canadian ice hockey star. In the ‘Evidence’ section I elaborate on this, but the essence is: go to where the ultimate power lies – TD’s.[2] Get their attention by: respecting their realities (scarcity of time and attention); telling them what you are already doing (most prefer doers over talkers); policy summarizing the change you must have to succeed (Pay for performance and innovation strategy to drive down costs);emphasizing the high costs of failure (falling farm incomes; difficulty in attracting family members of talent to take over; continuing corrosive and debilitating criticism from media; shrinkage in the social and economic vitality of rural economies; failure of Food Vision 2030 goal – “Ireland will become a world leader in Sustainable Food Systems (SFS) over the next decade.

# **Evidence**

## **A. Why an Evidence-based Blog Series?**

### **Andy Grove – only the paranoid survive.[3]**

Andy Grove (former CEO and chair of Intel) famously observed ‘Only the paranoid survive’. His point was that even businesses that are thriving need always to be looking out for what he called a ‘strategic inflection point’ which means that a step change is looming – the future will not be like the past. When these occur, there are two options: adapt or die. He makes the point that: “The new environment dictates two rules: first everything happens faster: second, anything that can be done will be done, if not by you by someone else somewhere”. Successful companies are especially vulnerable because success breeds complacency and complacency breeds failure.

He recognized that the cycle of reaction to an emerging strategic inflection point was always the same – denial, escapism, acceptance, action – and that failure was guaranteed if acceptance and action happened too late.

### **Climate Change is a strategic inflection point for Irish farming.**

The evidence I have interrogated tells me the following:

1. Climate Change is happening faster, and actions are being taken elsewhere by your competitors.

Why: I listened on the radio to a woman in Midleton County Cork trying to cope with the hugely destructive effects on her home and business of a flood caused by the 'most rainfall in a day she has ever experienced' and on Countrywide (RTE Radio 1) to an East Cork vegetable grower struggling to get her potatoes harvested before the storm arrived. Climate change represents a strategic inflection point; as a farmer, climate change will benefit your business – longer growing season and slightly higher grass and crop growth – but it also comes with costs – more intense flooding (and probably also more and longer droughts) is also in your future. Secondly (which is what my blog series concentrates on) you will be facing more intense carbon-footprint competition in your key markets; these are where Grove's 'it will be done, if not by you by someone else somewhere' will come from. How smartly and quickly you and your policy system act on these realities will shape for good or ill your farming future.

2. Although there are many outstanding exceptions, Irish farming's response as a whole has been inadequate – many spending too much time on the 'denial' and 'escapism' phases: unless we accelerate our progress on 'acceptance' and especially 'action' our standing with premium consumers will weaken.

Why: Kenneth Galbraith observed that "Faced with the choice of changing one's mind and proving that there is no need to do so, almost everyone gets busy on the proof".

Some have been good at that, but proving that there is no need to do so takes time and effort which in many cases crowded out the time and capacity to: identify our real competitors, what key companies around the world are committing to; what policy systems in key export markets are doing to support their farmers' carbon competitiveness in key markets; what is evolving in terms of metrics; and what all of this might end up doing to your competitiveness.

### Poor Quality of the Public Debate

In his *Irish Farmers Journal* column of May 12, 2021, Damien O'Reilly, at the time also presenter of Countrywide on RTE 1 Radio (a key window for new voices) described the proceedings of a recent Agriculture Oireachtas Committee as 'a shambles'. He noted that there was no discussion whatever about "real tangible solutions to agriculture emissions", and concluded his piece as follows: "Parity of esteem needs to apply to a clean environment and safe, viable food production. Without both, we are all doomed." I shared his dismay at both the poor quality and tone of much of this and other 'debates', and the fact that unless it improved, it could result in very poor decisions at both farm and policy levels, and these could be very damaging to you commercially.

When you hear or read about claims, always ask for the source. In this and my other blogs, I do my best to give you a link to the source, so you can check it out for yourself. This is a minimum courtesy, and you should demand it of others.

### The Importance of Winning Court Cases

**California Court Decision:** Ornuua successfully defended its grass-fed claims for Kerrygold products against a class action suit in a California court; as every Irish dairy farmer knows, Judge Marilyn Huff found in its favour on February 3, 2019, based mainly on the quality and timeliness of the evidence it produced in support of its case. Every time I listen to or read assertions around Irish farming and its climate and environmental performance and prospects, I ask myself two questions: Evidence? Would Judge Huff agree.?

**Legally Binding Emissions Reporting:** Under the recently enacted Standards for European Sustainability Reporting Standards, 2023, your food company will have to report on its farm-level greenhouse gas emissions (Scope 3) and, if enacted, under the 'Greenwashing Directive' it will also be subject to legal sanction if it makes climate performance claims that are judged to be spurious.

**The Derogation Reduction:** As know, in the Nitrates Directive, there is provision in this law that allows member states to seek a derogation that would increase their per hectare limit, conditional on making a presentation on the environmental situation, the need for the derogation and *actions undertaken to ensure that the higher nitrogen limit is not and will not contribute to higher pollution* (emphasis added). [Derogation from the Nitrates Directive – Process Explained | News | Irish Co-Operative Organisation Society \(icos.ie\)](#). We failed to comply with this simple 6-word condition, which is why your derogation has been reduced. It is striking that in all the furore about the reduction none of the most vigorous complainants chose to take legal action challenging the decision or the data on which is based, for the simple reason that the chances of winning in court are close to zero. And this is because we failed to deliver on the commitment given in *Food Wise 2025* published 8 years ago (in 2015) that "Environmental protection and economic competitiveness are equal and complementary: one will not be achieved at the expense of the other."

Data that is credible and will stand up to legal scrutiny and forensic attack is gold dust, and a must have. And the only way to ensure that you have it is for you and your food companies to take action, and to ensure that you have the policies that will support you to amplify and deepen your commitment.

### Joining the Dots

Evidence has implications for action, but often the import of what is heard or seen is not understood. Three examples:

1. I attended remotely a seminar organized by MSD and hosted by the Irish Farmers Journal in early summer of 2020, where Frank Mitloehner (UC Davis) noted in passing that: 'Since 2015, California dairies have reduced 2.2 million metric tons of greenhouse gasses, a reduction of 25% in total emissions' I followed this up with him, and indeed it was the case that: California's Department of Food and Agriculture (CDFA) has been grant aiding such reductions since 2015; under state law, the sector also has a legal obligation to reduce its methane emissions by 40% by 2030; its farmers supply about 19% of the cow milk produced in the US, and the latter is a very rapidly growing and hugely valuable market for Irish dairy products.: Will Ireland's carbon footprint for its dairy products (Kgs of CO<sub>2</sub>e/Kgs of Milk) be competitive with California's in the future? If you look at the Walmart (largest grocer in the US) website, you will see that the main competition for Kerrygold products on their shelves is from Land O Lakes, and that their butter comes from California....
2. If you are a beef or sheep farmer, you are likely to know about New Zealand's Silver Fern company, which is jointly owned (50/50) by about 16,000 beef, sheep and venison farmers and a Chinese company, and accounts for about 30% of New Zealand's meat production. It has developed New Zealand's first certified Grass-Fed end-to-end Net Carbon Zero red meat. <https://silverfernfarms.com/us/en/our-range/net-carbon-zero-science>. It will have tariff-free access to the UK market, which in 2022 accounted for >43% by value of Irish beef exports.

3. You will see in Table 2 below that greenhouse gas emissions from the average dairy fell from 616 to 606 tonnes of CO<sub>2</sub>e from 2021 to 2022, and there were reductions also by the average cattle farm (from 157 to 151) and sheep farm (from 166 to 136). There were a few reasons for this fall, but an important one was the sharp rise in fertilizer prices, and the efforts by Teagasc to provide information on clover and mixed grasses that helped provide substitutes. The CSO tell us that fertilizer prices fell 45% from August 2021 to August 2022. If, as a result you decide to increase your chemical fertilizer use, you will probably undo your progress on emissions' reduction.

**You need it to give parity of esteem to the climate and environmental performance of your farm and your food processor.**

You will be very familiar with the basic parameters of the commercial performance of the average Irish dairy cattle and sheep farm. Teagasc has been compiling and publishing this data since 1972 and you can find 6 years of data at your fingertips such as the following:

**Table 1. Average Family Farm Income and Farm Size by Farm System, 2016–2023, Ireland**

Farm System	Average Family Farm Income (FFI) (000s €)								Average Farm Size (Ha)	
	2016	2017	2018	2019	2020	2021	2022	2023*	2021	2016
Dairy	54.0	90.2	63.3	69.2	79.0	98.7	148.0	105.0	64	56
Cattle Rearing	11.7	10.7	8.3	9.2	8.2	10.9	8.7	9.7	33	36
Cattle Other	15.0	16.3	15.1	14.1	15.5	17.2	16.9	17.3	36	37
Sheep	15.6	17.4	13.4	15.0	17.9	20.8	19.9	19.4	45	51

\*Projected. However, the income projection for 2023 for dairy is probably too high: I see in the latest CSO report that: “The most significant output price decreases in the 12 months to August 2023 were in milk (-38.0%) and that.. significant input price drops were recorded in fertiliser (-45.0%) and motor fuel prices (-12.9%), while electricity prices were up by 25.1%” [Agricultural Price Indices August 2023 - CSO - Central Statistics Office](#)

**Sources:** Income data for 2022 and 2023 (prospects): [Outlook 2021 \(teagasc.ie\)](#) pp. ii, iii

Income data 2016–2021 and Farm Size 2021: Dillon, Emma, Trevor Donnellan, Brian Moran and John Lennon, 2022. *National Farm Survey 2021*. [2022 - Teagasc National Farm Survey 2021 - Teagasc | Agriculture and Food Development Authority](#), p. xii

Farm Size 2016: [Microsoft Word - NFS 2016 cover pages\\_long \(teagasc.ie\)](#), p. 3

However some of you are probably less familiar with the average farm's performance as regards what economists refer to as 'public goods', i.e., climate and environmental outcomes:

**Table 2. Emissions: Climate (CO<sub>2</sub>e), Air (ammonia), Water Quality (N Use Efficiency), Average Farm Level, by Ruminant Farm System, 2017–2022, Ireland**

Public Good	Row	Indicator	2017	2018	2019	2020	2021	2022
1. Climate		Emissions of GHG						
DAIRY	(1)	Total Farm Avg. Ag Tonnes of CO <sub>2</sub> e	547	575	579	600	616	606
Dairy Footprint	(2)	Kg CO <sub>2</sub> e/Kg Milk FPCM LCA	1.12	1.12	1.07	1.07	1.05	1.06
CATTLE	(3)	Total Farm Avg. Ag Tonnes of CO <sub>2</sub> e	152	161	150	147	157	151
Beef Footprint	(4)	Kg CO <sub>2</sub> e/Kg Live-weight beef	12.1	12.7	11.8	11.8	12.1	9.4
SHEEP	(5)	Total Farm Avg. Ag Tonnes of CO <sub>2</sub> e	161	157	153	153	166	136
Sheep Footprint	(6)	Kg CO <sub>2</sub> e/Kg Liveweight sheep produced	11.2	12.1	10.8	12.2	11.5	7.8

2. Air Quality		Kg Ammonia Emissions (NH <sub>3</sub> /Ha)						
DAIRY	(7)		48.0	51.4	49.1	48.2	45.1	46.9
CATTLE	(8)		26.1	26.2	24.3	22.9	23.1	22.0
SHEEP	(9)		20.7	20.4	19.2	18.6	19.4	12.7
3. Water Quality		N Use Efficiency (%)						
DAIRY	(10)		24.3	21.5	24.2	25.5	26.8	27.7
CATTLE	(11)		22.8	20.6	22.3	23.0	21.9	33.9
SHEEP	(12)		30.6	24.6	29.4	29.3	25.7	37.6
4. Biodiversity			NA	NA	NA	NA	NA	

Source: Buckley and Donnellan 2023. 2022-Sustainability-Report Teagasc October.pdf pp. 78-83 [Sus Report Cover 2022 \(teagasc.ie\)](#), and Table 10, Blog 10 CAP 2023-2027 [Climate Policy for Ruminant Agriculture in Ireland blog 10 | UCD Earth Institute](#)

Why is this important? You need to know it because:

- Rows (1), (3) and (5) are telling you how well the average farm in your sector is doing over time in delivering the 25% reduction by 2030 obligation; rows (2), (4) and (6) are telling you likewise about the average carbon footprint competitiveness in your sector; rows (10), (11) and (12) provide some inkling as to the average efficiency with which nitrogen is being used by each farm system over time, which will of course be of central relevance if you are a derogation farmer. You can learn much more by clicking on the link to Buckley and Donnellan 2023 above, which provides much more nuance on the carbon footprint (including its breakdown for energy used in farming etc.) and the distribution –best, middle, and worst – within each farm system; Teagasc have been collecting and publishing this data for many years, so you can go back to see a much longer time series; access to the sustainability reports, beginning in 2013 is available at: [Sustainability Reports - Teagasc | Agriculture and Food Development Authority](#)
- As you record your own performance, these data provide you with a baseline comparison within your sector; as your food company strives to get its carbon footprint into line with the best in each of its markets, it provides a very useful marker as to its relative progress locally; if you a derogation farmer, the indicators on nitrates performance in your catchment will be of central significance for your prospects of holding onto your derogation.
- The Irish policy system’s fitness for purpose will be judged by the extent to which it maximizes the prospects of delivering the Food Vision ambition of global leadership, and these data capture some important performance indicators.
- It allows you to discriminate between blatherers and those who are most likely to deliver what you need to succeed. Much of what I hear in the Irish public square shows no awareness of the realities you face and would not survive for a millisecond in Justice Huff’s court. You really cannot afford to be led by those who haven’t taken the trouble to acquaint themselves with the most basic of salient facts. In future, if those promising to help you show awareness of these realities, including the evidence above and how to deliver the outcomes you need, listen carefully, engage their help, and support them. Avoid the others: the last thing you need is to be lead enthusiastically down a cul-de-sac.

Below, I provide more evidence on: progress, and why there is qualified reason for optimism; the carbon footprint narrative, including why what is likely to happen in your key markets is so important; the actions you need to be taking, informed as always by Andy Grove: “Activity is not output”; and conclude with evidence around the policies you must have to succeed, and a few tentative ideas about how to convert them into outcomes.

### Your Commercial Future will mainly be Determined by Decisions by Consumers, Farmers and Governments in Key Export Markets

Some key export data for 2022 is presented below. The arguments supporting the above proposition are outlined in the sections that follow.

**Table 3 Exports by Value (€ Million), Dairy, Beef, Sheep, Ireland 2022**

Destination	Dairy		Beef		Sheep		Total	
	Value	% of Total						
EU	2,416	35.8	1,496	49.0	348	76.7	4,260	41.5

Great Britain	775		1,079		49		1,903	
N. Ireland	491		237		8		736	
UK	1,266	18.8	1,316	43.1	57	12.6	2,639	25.7
US	660	9.8	21		<1		681	6.6
China	441	6.5	<1		<1		441	4.3
Other	1967	29.1	219	7.9	49	10.7	2,237	21.9
Total	6,752	100	3,052	100	454	100	10,258	100

Source: CSO 2023. Personal Communication from Carol Forrester at: [Trade@cso.ie](mailto:Trade@cso.ie), August 8, 2023

EU data compiled from member state data.

Top 3 destinations EU (million €)

Dairy: Netherlands (1,007); Germany (485); France (267)

Beef: France (393); Italy (249); Netherlands (242)

Sheep: France (146); Germany (78); Sweden (48)

## B. Progress

There has been important progress on many fronts, including: a very impressive portfolio of information and farmer support generated mainly by Teagasc; growing emissions-reduction efforts by a number of farmers, including a sharp increase – from 5% in 2018 to 67% on 2021 in the case of dairy (from Table 11 in Blog 10 CAP 2023–2027 [Climate Policy for Ruminant Agriculture in Ireland blog 10 | UCD Earth Institute](#)) – in the adoption of low emissions slurry spreading; large increase in expenditure on climate and environment in CAP 2023–2027 relative to CAP 2014–2020; increasing expenditure on R&D to find new and cheaper ways to reduce emissions; increasing interest in changing to low emission farming systems, including organic farming; co-op and food company initiatives to reduce emissions, including bonus payments and rapid increase in membership of the Sustainable Dairy Assessment Scheme (SDAS) and the Sustainable Beef and Lamb Scheme (SBLAS).

But are we on track to deliver the huge benefits promised by Food Vision? The answer unfortunately is ‘No’ for the following reasons: the reality that there will be a direct relationship between Irish farming’s future commercial success in premium markets and the quality of its climate and environmental stewardship is not yet widely understood and accepted; competitors in key markets are investing heavily in reducing emissions to support smart policies that will improve their future carbon footprint of their milk and meat products that will be competing with yours; we are not yet matching them

### Grounds for (Qualified) Optimism

1. The progress noted above
2. There are opportunities to deliver outcomes at scale which if taken will transform your prospects and deliver multiple benefits:

The opportunity to reduce greenhouse gas emissions at scale while simultaneously improving water and air quality will be greatest in the dairy-intensive farming regions, while the best nature conservation opportunities (Natura 2000 sites etc.) tend to be where beef and sheep predominate. Often, actions will be complementary, e.g., switching from Calcium Ammonia Nitrate (CAN) to protected urea will reduce both greenhouse gas and ammonia emissions, but in other cases, e.g., a dairy farm where every square metre is devoted to grass production, providing more habitat for nature is likely to come at the expense of milk production. If/when policy gets around to finding where the greatest payoffs to effort lie, and supporting action at scale, you will win.

3. Other Dividends are becoming clear.

You will also garner social dividends: As you inevitably experience more extreme weather events – more intense storms droughts flooding fires – and need help to adapt, if you are seen to be taking climate action and improving quality of air water and nature seriously, and can prove it, the public response to your needs is likely to be generous rather than hesitant and grudging. The drum beat of criticism in the media will first abate and then turn to admiration, it will be easier to attract successors of high competence and idealism to take over from you, and at the margin you may also find it easier to recruit help.

But this optimism will prove to be misplaced unless: the realities of future carbon footprint competition are widely recognized; you and most farmers take action with existing policies; and deliver the policy changes that you need to be globally competitive.

## C. Carbon Footprint Competition

This is in three sections: the first focuses on the point that premium customers exist – markets are not all the same; the second addresses what we can learn from looking back. This is interesting, but not at all as significant for you as what is in prospect by the main suppliers in your key markets which I address in the final section.

The carbon footprint is estimated by dividing the Kgs of emissions in carbon equivalent terms (CO<sub>2</sub>e) and – if they are included, carbon removals (the numerator) – by the Kgs of product generating these emissions (the denominator).

The 'equivalent' term is used because there are a number of different greenhouse gasses. To capture the aggregate pressure that a basket of different gasses imposes in a single number, the UN policy system uses the 'global warming potential' that a tonne of each gas imposes over a 100-year period, as estimated by the Intergovernmental Panel on Climate Change (IPCC):

**Table 4. Global Warming Potential (GWP) - Weighting per metric ton of Methane (CH<sub>4</sub>) and Nitrous Oxide (N<sub>2</sub>O) relative to one ton of Carbon Dioxide (CO<sub>2</sub>)**

Gas		100 Year Period			20 Year Period		
		2007	2014	2021	2007	2014	2021
		(1)	(2)	(3)	(1)	(2)	(3)
CO <sub>2</sub>	(1)	1	1	1	1	1	1
CH <sub>4</sub> (Methane)							
Fossil Origin	(2)	25	28	29.8	72	84	82.5
Non-Fossil origin	(3)			27.2			80.8
N <sub>2</sub> O (Nitrous Oxide)	(4)	298	265	273	289	264	273

Source: [IPCC Sixth Assessment Report \(AR6\) Global Warming Potentials - \(errevolution.energy\)](#), August 26, 2021

The numbers in Column (3) are those which are applied at present: To estimate total emissions in CO<sub>2</sub>e terms, the tonnes of methane and nitrous oxide emissions are multiplied by 27.2 and 265 respectively and this is added to the tonnes of CO<sub>2</sub> to arrive at the CO<sub>2</sub>e estimate.

### Emissions and Removals

An important distinction is whether the emissions measured are confined to those which are released on the farm, or include emissions associated across the supply chain. The system boundaries of the Teagasc Life Cycle Analysis (LCA) model are defined to include all emissions associated with the dairy production system up to the point where milk is sold from the farm.

A further consideration is whether carbon removal or losses – carbon captured by trees and other vegetation or by soils on-farm etc (removals) or released by peaty soils (losses) – are included. Another is the extent to which emissions are limited to agricultural emissions, or also include related energy emissions.

#### 1. Markets are not all the same.

**Key Point:** In some export markets, Irish food is regarded as a premium product, and secures higher prices. In every business, holding on to the premium customers you already have is the top priority.

This is exemplified by the following examples from the dairy side of the house:

- **Anecdotal experience in New York:** I was the Environmental Defense Fund's chief economist from 2014–2018 based in Manhattan. About every two weeks, I bought Ornu's ('Kerrygold') butter and other products. Per pound, they secured a price premium over substitute products. Checking the Walmart website on October 21, 2023 ([kerrygold butter - Walmart.com](#)) I see that: Kerrygold butter (salted, 8 oz, 2 butter sticks) is selling for 54.8 cents per oz, while the dominant supplier to the US market (Land O Lakes) is offering its 1 lb pack (salted 4 butter sticks) for 39.3 cents per oz. [land o lakes butter - Walmart.com](#). The folks I observed buying Kerrygold all seemed to be richer than me. The macro data supports my anecdotal experience: In the US market, between 2016 and 2021 the volume of Irish dairy sales rose by 109%, total revenues rose by 131% (from €186 million to €431 million) while average price per tonne rose by >10%, from €5983 to € For all Irish dairy export sales over the same period the average price per tonne fell. (data from Table 3, Blog 5 US [Climate Policy for Ruminant Agriculture in Ireland blog 5 | UCD Earth Institute](#))
- **Resisting Price Sags in some markets:** If you are a dairy farmer, you will know well that milk prices have fallen sharply since the boom year of 2022. However, it is interesting to look at what has happened to average prices in different markets (Table 5). Given that the composition of exports is unlikely to have changed significantly in one year, it is striking that the price reductions per tonne in the German and US markets have been modest, - 2.8 and -0.2 per cent respectively, while in the Netherlands, France and the UK they have been very pronounced, in the range of 16.2 to 9.8 per cent. It seems plausible that the stickiness of the former is due in part to consumer loyalty to the Kerrygold brand. I have no idea what explains the >27% increase in price in the China market.

**Table 5. Average Price in € per tonne and price change per tonne from 2022 to 2023 (Jan-May), by sector and main markets, Dairy Exports, Ireland**

Sector and main destinations	Volume (Tonnes)	2022	2023 (Jan-May)	Average Price Difference	% change to 2022 base
<b>DAIRY</b>		Price/Tonne	Price/Tonne		
<b>EU</b>		€	€		
Netherlands	225,285	4,471	3,748	-723	-16.2
Germany	98,106	4,939	4,803	-136	-2.8
France	46,660	5722	5096	-626	-10.9
<b>Great Britain</b>	176,856	4,381	3953	-428	-9.8
<b>US</b>	72,571	9,182	9,163	-19	-0.2
<b>China</b>	79,145	5567	7,093	+1,526	+27.4

Source: CSO 2023. Personal Communication from Carol Forrester at: [Trade@cso.ie](mailto:Trade@cso.ie), August 8, 2023

- **Price Variation in 2022:** Darragh McCullough (*Farming Independent*, May 5, 2023) reported that in 2022 French farmers received milk prices that were over 25% lower than their Irish equivalents simply because so much of French dairy is used domestically. Where you sell matters. [Darragh McCullough: Dairy farmers have rarely had it better, so the sob story over milk price cuts doesn't really wash | Independent.ie](#)
- **Evidence from the coal face:** Róisín Hennerty, Managing Director of Ornu Foods in an interview with Eoin Burke-Kennedy *Irish Times* May 11, 2019: "Ireland's food industry trades on the idea of Ireland as a pristine pasture, unspoilt by heavy industry, something that plays particularly well with the Germans. But the State's record on climate change and sustainability is completely at odds with this... We have a responsibility. We're Ireland's most visible dairy brand. It's critically important to us that we embrace the change that needs to happen. We need to be part of the action-driven initiatives to reduce emissions." Blog 6, Complacents vs Worriers: [Climate Policy for Ruminant Agriculture in Ireland blog | UCD Earth Institute](#)

### International Competition and Your Carbon Footprint – looking back.

I have had a look at three recent cross-country studies of national average carbon footprints, all three of which assess data for dairy products, and one of which does so for beef. The results are below. The footprint competition for Irish food will be fought and won or lost in our three major markets which in rank order are EU, UK and US. NOTE: These use very different methodologies, and base years, and the findings therefore are of limited comparative value as models for the future. But they are undertaken by serious researchers, and they show that the footprint issue is now on the table, and how jurisdictions and companies compare could be an important consideration in decisions by consumers, companies and countries in the future.

**Dairy:** In the *EU market*, studies by Mazzetto et al, 2021 and Wirsenius et al, 2020 estimate average carbon footprint for 8 and 9 EU member state respectively. Their estimates for Ireland are 1.07 and 1.44 Kg/ Kg FPCM respectively, ranked as 4<sup>th</sup> and 5<sup>th</sup> amongst the suppliers they assessed in the EU, with Denmark (0.90 and 1.22 respectively) featuring in the top tier of both studies. Ireland's ranking by the FAO (22<sup>nd</sup>) is much lower, a product of the fact that it included all 27 member states in their ranking, but especially because FAO only measures emissions that occur within the farm gate. Also, note that the estimated gap between Ireland (0.8) and those ranked 8<sup>th</sup> (France and Germany (0.6) is not very wide.

Our second biggest dairy market is *the UK*. The fact that the FAO comparisons shows that UK's producers >30% efficient that Ireland (0.6 vs. 0.80) is sobering and Wirsenius et al also give UK producers a slight competitive advantage (1.40 vs 1.44). With their free trade agreements, NZ and Australia will over time have tariff-free access to the UK market; Mazzetto et al show New Zealand (0.77) having a strong competitive advantage over Ireland (1.07), but Wirsenius shows negligible difference with NZ at 1.40 and IRL at 1.44, while the FAO finding favours Ireland (0.6) vs New Zealand (0.9)

Our third biggest market is *the US*. the FAO data shows its dairy farmers with a better footprint (0.6) than Ireland (0.8) but both Mazzetto (1.23 vs 1.07 for Ireland) and Wirsenius (1.49 vs 1.44 for Ireland) show Irish farmers with the more efficient footprint.

**Beef:** Within *the EU*, FAO, 2020 show the Netherlands with the lowest carbon footprint (Kgs CO<sub>2</sub>e/Kg Meat) at 10.7 vs. Ireland's estimated emissions of 17.5 (ranked 5<sup>th</sup> within EU); Ireland's footprint is higher than Germany's (14.8) but lower than that of France (22.0); these are the EU's two largest producers. Within *the UK*, its beef producers are slightly higher (18.2) than Ireland's while NZ (17.4) and Australia's (22.0) are marginally lower and considerably higher respectively.

**Table 6. Carbon Footprint (Kg CO<sub>2</sub>e/Kg Product) Some Cross-Country Comparisons DAIRY and BEEF, 3 Studies**

DAIRY				BEEF

	FAOSTAT 2020 (within farm gate only) Footprint		MAZZETTO et al, 2021 Footprint		WIRSENIUS ET AL 2020 (Prod. Emissions Intensity) Footprint		FAOSTAT 2020 (within farm gate only)	
Product	Raw milk of cattle		Kg FPCM		Kg FPCM		Meat of cattle with bone fresh or chilled	
1. EU	Footprint	Rank in EU	Footprint	Rank in EU	Footprint	Rank in EU	Footprint	Rank in EU
Top two footprint rankings in EU (footprint)	Cyprus (0.3)	1	Portugal (0.86)	1	Sweden (1.21)	1	Netherlands (10.7)	1
	Czechia (0.4); Hungary (0.4)	2	Denmark (0.90)	2	Denmark (1.22)	2	Cyprus (11.9)	2
Germany	0.6	8	1.53	8	1.30	2	14.8	6
France	0.6	8	1.08	5	1.34	3	22.0	17
<b>Ireland</b>	<b>0.8</b>	<b>22</b>	<b>1.07</b>	<b>4</b>	<b>1.44</b>	<b>5</b>	17.5	13
<b>2. Other Major Markets/Competitors</b>								
<b>UK</b>	<b>0.6</b>		<b>NA</b>		<b>1.40</b>		<b>18.2</b>	
NZ	0.9		0.77		1.40		17.4	
Australia	0.6		1.06		NA		22.0	
<b>US</b>	<b>0.6</b>		<b>1.23</b>		<b>1.49</b>		<b>13.5</b>	

FAOSTAT,2020 Emissions domain.

Mazzetto et al, 2021. Mazzetto, A., S. Falconer, and S. Ledgard. 2021. *Mapping the Carbon Footprint of Milk for Dairy Cows*. Report for DairyNZ. Lincoln, New Zealand: AgResearch Limited. [Updating the carbon footprint for selected New Zealand agricultural products an update for milk \(mpi.govt.nz\)](https://www.mpi.govt.nz/updates/2021/09/09/Updating-the-carbon-footprint-for-selected-New-Zealand-agricultural-products-an-update-for-milk/)

Wirsenius, Stefan, Tim Searchinger, Jessica Zions, Liqing Peng, Tim Beringer, and Patrice Dumas. 2020. *Comparing the Life Cycle Greenhouse Gas Emissions of Dairy and Pork Systems across Countries Using Land-Use Carbon Opportunity Costs*. Washington, D.C.: World Resources Institute. [Comparing the Life Cycle Greenhouse Gas Emissions of Dairy and Pork Systems Across Countries Using Land-Use Carbon Opportunity Costs | World Resources Institute \(wri.org\)](https://www.wri.org/publications/2020/07/comparing-the-life-cycle-greenhouse-gas-emissions-of-dairy-and-pork-systems-across-countries-using-land-use-carbon-opportunity-costs/)

If you are a dairy farmer, if you want to really choke on your porridge, have a look at how Ireland rates when the opportunity costs of land are included – see Table 3.1 page 53 in World Resources Institute (Searchinger et al), 2021. *A Pathway to Carbon Neutral Agriculture in Denmark*, WRI [carbon-neutral-agriculture-denmark.pdf \(wri.org\)](https://www.wri.org/publications/2021/06/06/a-pathway-to-carbon-neutral-agriculture-in-denmark/). The point is not to argue that these studies that conclude we are not in the top tier are correct, but to make the point that there are many competing narratives out there, not just ours, and *much more importantly* (see next) changes are afoot that are intensifying competition in real time.

### Carbon Footprint Competition – looking ahead.

As already noted, for you, the future is much more interesting and relevant than the past. Internationally, we observe that some companies and national groupings are beginning to take action aimed in part to being able in the future to claim climate performance superiority based on their estimates of their carbon footprint.

**Developments in France:** In 2018, the French government initiated a programme to reward farmers for reducing their greenhouse gas emissions and/or removing carbon, by creating a market for such achievements [Low-carbon label: rewarding actors in the fight against climate change \[Ministries Ecology Energy Territories \(ecologie.gouv.fr\)\]](https://www.ecologie.gouv.fr/en/low-carbon-label-rewarding-actors-in-the-fight-against-climate-change) By 2022, annual reductions by carbon removal and emissions reductions were 843,000 tonnes and 734,000 tonnes CO<sub>2</sub>e respectively, and prices secured per tonne were in the range of €8-125.

**Carbon footprint performance claims by the dairy industry in Flanders:** On Sept 5, 2023, ILVO (Flanders Institute for Agricultural, Fisheries and Food Research) released a Press Release ‘Most climate-friendly milk comes from Flanders’, with the evidence coming from: ‘Detailed climate scans on some 150 Flemish dairy farms show that one litre of Flemish milk is on average associated with only 0.99 kg of CO<sub>2</sub> equivalents. This is lower than the score of all other milk producing countries. [Source: ILVO-research in the Databank AgriFootprint 6.0/ green bar: Klimrek project 2023. The measuring methods (LCA based on the PEFCR – Product Environment Footprint Category Rules) of both are the same and are thus comparable.] ILVO is a serious and very credible organization. <https://ilvo.vlaanderen.be/en/news/most-climate-friendly-milk-comes-from-flanders>

It shows its footprint ranking within Europe as follows: Flanders (0.99, with Belgium at 1.03); Denmark (1.06); Ireland (1.13); Netherlands (1.17); Great Britain (1.28); France (1.29), and its footprint estimates for outside Europe include New Zealand (1.09); America (1.55); Brazil (2.49).

Thought Leadership by Denmark on Carbon Labelling: See Working Group Report: <https://fvm.dk/klimamaerke>. They propose the creation of performance labelling of farms akin to the carbon efficiency ratings of buildings (A through G).

**UK Food Data Transparency Strategy:** In the UK government's food strategy, published 13 June 2022, it launched its *Food Data Transparency* (emphasis added) Strategy (FDTS) Government food strategy – GOV.UK ([www.gov.uk](http://www.gov.uk)). Its Eco Working Group (eco WG) has been established to introduce consistent scope 3 (i.e. farm based GHG) measurement and reporting for the food and drink sector and a mandatory methodology for eco-labelling [Eco Working Group Terms of Reference.pdf \(publishing.service.gov.uk\)](https://publishing.service.gov.uk). In 2022, the share of exports going to the UK for dairy, beef and sheep were 43.1 and 12.6 per cent respectively.

**Strategic Competition from New Zealand:** When Damien O'Connor, then Minister of Agriculture in NZ, launched its climate strategy for farming on August 18, 2023, the heading was 'New Emissions Plan will Future Proof New Zealand's Export sector', and he observed that: "Nestle, the single biggest customer of our biggest company, Fonterra, has committed to a 50 per cent reduction of scopes 1, 2 and 3 emissions by 2030. Many more companies have similar targets. This is a tectonic shift in our export markets, meaning our farmers will have to reduce their emissions in order to sell to them" <https://www.beehive.govt.nz/release/new-emissions-reduction-plan-will-future-proof-nz%E2%80%99s-largest-export-sector>. As you know, New Zealand now has tariff free access to the UK market.

#### D. Action with the existing policy mix

To quote Andy Groves again: "Investment decisions are personal decisions; don't wait for the position to be clarified". Time is not on your side. You need to do what you can do right away, with the existing policies. I apologize in advance for telling most of you what you already know: The list below was useful for me to clarify my own thinking so skip if it seems redundant or irrelevant.

##### 1. Knowing the Performance of Your Farm

**Key Point:** Unless you know where you are starting from you can't claim credit for what you have achieved, which means that you do not have a story to tell the world. Teagasc's 'AgNav' is a key resource. [Environment – Introducing AgNav – putting climate action planning back in farmers' hands – Teagasc | Agriculture and Food Development Authority](#)

Join Bord Bia's Sustainable Dairy Assurance Scheme (SDAS) or its Sustainable Beef and Lamb Assurance Scheme (SBLAS) both of which include performance measurement, described by Bord Bia for SBLAS as follows:

"Under the SBLAS, data is assembled from all available sources relating to the performance of the farm (live sales, slaughtering, farm inputs, etc.). This information is then merged on the Bord Bia database with the additional data collected by the Bord Bia farm auditor during audit. Calculations are performed on this database using the combined data in accordance with the accredited Bord Bia Carbon Footprint Model. These calculations provide the carbon footprint of the meat produced. This is a key indicator of the sustainability of the farm".

##### [Sustainable Beef and Lamb Assurance Scheme \(SBLAS\) – Bord Bia](#)

As soon as it is feasible to do so, you should add carbon removals and other environmental metrics to your 'performance table', and press the policy system to integrate biodiversity into the suite of farm indicators. Think 'court case', and the data you and the companies to which you supply need to have to win a legal challenge.

##### 2. Read up on the portfolio of actions now available that can deliver emissions reductions.

**Key Point:** Reading carefully before you seek out advice helps you (a) form a preliminary independent point of view as to what could work with you, and (b) will increase dramatically the productivity of your subsequent engagements with other farmers, advisers, and other experts.

When I went to the US to do a PhD, on my first night there, I explained to a fellow student that I couldn't cook. Her reply was scathing but very useful. 'Frank, that's pathetic. If you can read, you can cook.' A day later, she gave me a few pages of recipes, ranked by cooking time from 5 to 30 minutes, and I never looked back. Taking action on climate change is more complicated than cooking, but reading the right material will:

- Get you about half-way to where you need to be to make a workable plan.
- Be good manners. The specialist advisors are few – at the MACC launch in Ashtown we were told that about 20 have been appointed under the 'Signpost' banner so their time is incredibly precious.
- Enhance productivity. The quality of the knowledge you acquire, and the speed with which you acquire it, will be dramatically enhanced if you read first.

Some material I have encountered that I would recommend:

- [2023 – Marginal Abatement Cost Curve 2023 – Executive Summary – Teagasc | Agriculture and Food Development Authority](#) It is essential that you get value for money for your efforts, and this guides you towards those measures that are 'no regrets', i.e., commercial gains are greater than costs.
- Signpost Advisory Programme, Sustainability Digital Platform: [Dairy – 12 Steps for Dairy farmers to Reduce Gaseous Emissions – Teagasc | Agriculture and Food Development Authority](#); [Beef – 12 Steps for Beef farmers to Reduce Gaseous Emissions – Teagasc | Agriculture and Food Development Authority](#)

Courage is always the scarcest ingredient. Signpost farmers are heroes and the 12 steps are early insights from their experience. Apologies to sheep farmers – I don't see '12 steps' for you.

- Government of Ireland, 2022. [Report of the Food Vision Dairy Group](#), October 25 p. 2-4.; Government of Ireland, 2022: [Report of the Food Vision Beef and Sheep Group to mitigate Greenhouse Gas Emissions from the Beef Sector](#). Food Vision 2030. November 30. These are essential reading, because it tells you where policy is going.

### 3. Join Signpost now. [Signpost Programme – Teagasc | Agriculture and Food Development Authority](#)

**Key point:** Learning by doing is always and everywhere the most important kind of learning, but learning from others who have learned the hard way is a close second.

In its early days, when Ryanair was flailing financially, Michael O'Leary had a 'Damascus moment' when he visited Herb Kelleher who had steered Southwest Airlines based in Texas to success by: boarding passengers in simple groups; cleaning and turning aircraft quickly; having a single aircraft type (Boeing 737) that could be flown by all crews; flying point-to-point instead of through hubs; and focusing initially on smaller, underserved airports. There are Herb Kelleher equivalents amongst the Signpost Farmers; find and learn from them and give them credit.

### 4. Include reducing carbon losses and increasing carbon removals in your climate strategy for your farm as soon as the data and policies allow.

**Key Point:** Both reducing losses and increasing removals could be major contributors to the delivery of your farm climate strategy and that of your food company. BUT there are considerable uncertainties around baseline choices and policy. Be ready to move quickly when these are sufficiently reduced.

The focus at present is mainly on reducing emissions, and this makes sense for a few reasons: First, this is where the Irish policy focus is today – the -25% obligation for the farming sector by 2030 is all about emissions reduction. Secondly there are still broad uncertainties around the estimates of: the baseline in terms of removals and (especially) losses; some of the measures that are most likely to reduce losses at scale, their costs, and outcomes. Thirdly, the policy and media focus are almost exclusively on 2030, while investing in tree growing and some other measures that could deliver very large carbon removal will only begin to do so significantly post 2030. Finally, while the EU is likely to include reduction in carbon losses and increase in farm removals in its performance metrics for consumers, and this is likely to be true also of the UK – the latter are depending heavily on afforestation to meet their net zero targets – this may not be true in the US.

A sense of the scope for reducing losses is provided below:

**Table 7. Provisional Estimates of Losses (positive numbers) and Removal (Negative) Land Use and Land Use Change, 2022 to 2035, 000s Tonnes CO2e, Ireland**

Category	Column	Area ('000 Hectares)	Emissions (Mt CO2EQ)
Grass-peat soils	(1)	335	9.00
Wetlands	(2)	1,225	2.10
Settlements	(3)	124	0.20
Other Land	(4)	51	0.05
Crop Land	(5)	780	-0.27
Forest land/harvested wood	(6)	773	-1.83
Grassland-Mineral Soils	(7)	3820	-2.00
Total	(8)	7,108	7.25

**Source:** Pat Tuohy Teagasc, MACC Launch, Ashtown July 12, 2023

Tuohy reported provisional findings on research which indicates that the current estimates of emissions from grass-peat soils (9.00 million tonnes) are likely to be much too high, because they are based on the assumption that land drained in the past is fully functioning as such today, when the evidence he presented concluded that this assumption is very unlikely to hold.

### 5. Work with the food companies that you supply.

**Key Point:** There are many arenas where you will disagree with your food processor/marketer, but climate performance is one area where your incentives are aligned – you are both in the same boat, and it will sink or not depending on your collective efforts

As a supplier, you depend on your processor to deliver an average carbon footprint that ensures your access to premium markets. This means that you need to encourage and support the co-op/company leadership in advancing its carbon footprint agenda. The clearest expression of this is to encourage and enable the development and delivery of price premia for farmers who reduce emissions and store carbon, including a

step wise incentive, whereby at the margin, higher premia are payable the more emissions are reduced and/or carbon is removed. More at: Blog 8 Companies [Climate Policy for Ruminant Agriculture in Ireland blog 8 | UCD Earth Institute](#)

**The Free-Rider Problem:** The key message at the launch of Teagasc's new Marginal Abatement Cost Curve (MACC) in Ashtown on July 12, 2023 was that there would have to be a step change in the rate of take up of the measures identified if the 25 per cent reduction in greenhouse gas emissions was to be delivered. This reality also applies at carbon footprint level for companies; you depend on other farmers supplying your co-op or company to reduce their emissions and store carbon such that the average collective footprint is competitive. You need to encourage them to engage seriously and effectively on this agenda. In doing so take account of the realities that all farmers have an incentive to benefit from the carbon footprint delivered by emissions reduction and carbon removal at scale, but let fellow farmers do most of the effort (what economists call the 'free rider' problem) and that farms have different attributes that mean they have different strengths and weaknesses as to what they can do, and farmers are similarly diverse.<sup>[4]</sup>

### **Don't be afraid to embrace emotion and beauty.**

Nature can be beautiful, and you can also take inspiration from your local poets. Seamus Heaney is buried near the farm where my father had his beginnings. The epitaph on his gravestone in Bellaghy is: "Walk on air against your better judgement." Not a bad motto to take with you as you address the climate and environmental opportunities on your farm and beyond.

### **Securing Collective Action at Scale**

The easiest and by far the most effective way to do so is to require such action by law. It is effective because it removes the challenge of how to secure an exceptionally high rate of participation, which was the key underlying theme at the MACC launch. This is what NZ proposes to do: Every farm above a certain threshold - equivalent to emissions of ~200 tonnes CO<sub>2</sub>-e per year - will be required to take part, which will include producing a plan, and being subject to a levy per tonne of emissions, with separate levy prices used for nitrous oxide and biogenic methane, and revenues recycled to support abatement. <https://www.beehive.govt.nz/release/new-emissions-reduction-plan-will-future-proof-nz%E2%80%99s-largest-export-sector> I accept that Ireland has unambiguously decided that all measures will be 'opt in' but I would encourage consideration that specific measures, such as choice of fertilizer, be made mandatory. But for the rest of this discussion, I assume that the 'opt in' is a pre-requisite for action.

## **E. You Need New Policies**

### **Policy Matters**

In the Citizens' Assembly report on Biodiversity Loss, Aideen Gloin, a sheep and beef farmer in the Ox Mountains, Sligo testifies to the centrality of policy in shaping outcomes: "Farmers follow policy and then they use policy to make changes in how they approach nature. Farmers have removed biodiversity because of policy and income. The limited eligibility of biodiversity areas on farms for payments has been disastrous." [Report-on-Biodiversity-Loss\\_mid-res.pdf \(citizensassembly.ie\)](#), p. 82.

The evidence from all four of my 'policy' blogs is overwhelming.<sup>[5]</sup> Climate policy only works when:

- The core policy focus is on reducing emissions and storing carbon at scale.
- Policy provides emitters with a very strong continuing incentive to do so cost-effectively, which is typically a mix of carrots and sticks, which can be summarized as 'pay for performance.'
- There is an innovation strategy that widens and deepens the choices and reduces the costs of doing so.

### **Advocacy Gap**

The reason why you don't have such policies is the 'advocacy gap'. There is no organized farmer constituency that demands them with skill and persistence. If your farm business depends on the patronage of premium customers in key export markets, unless this gap is filled, it is likely to damage your commercial viability in the future. Farm organizations compete for members and as such respond to what they want. There is no evidence that there is pressure from their members to deliver what it will take for you to hold onto and grow the patronage of premium consumers. There is no evidence of any farmer lobbying for the policies that would have delivered the Food Wise commitment in 2015 to give equal weight to climate and commercial outcomes, a loss with large commercial consequences (the loss of the 250 Kg/Ha derogation).

You may find interesting an advocacy model from the US which provides a very effective way of supporting their farmers to deliver climate outcomes at scale. It is the Food and Agriculture Climate Alliance which in 2020 was co-chaired by Zippy Duvall President, American Farm Bureau Federation (AFBF), Fred Krupp President, Environmental Defense Fund (EDF), Chuck Larew, President National Council of Farmer Cooperatives, and Rob Larew National Farmers Union. They prepared a set of climate policy recommendations for farming for whoever won the upcoming Presidential Election. It is no surprise that many of their funding recommendations (worth between 10 and 20 billion dollars, depending on how widely you define 'smart climate measures') were included in the Inflation Reduction Act in July 2022. [Food and Agriculture Climate Alliance Outlines Policy Recommendations \(agnetwest.com\)](#). In the Inflation Reduction Act which President signed into law in July 2022, up to \$20 billion was provided to fund smart agriculture measures, many of which were recommended by FACA. [Declaration of interest: I was the chief economist of the Environmental Defense Fund from 2014 to 2018] As I write, FACA has made recommendations to the Congressional committees working on the US Farm Bill. [farm-bill-recommendations.pdf \(agclimatealliance.com\)](#). This Bill is a package of legislation that gets passed approximately every five years which shapes the landscape of American agriculture. This is what effective lobbying in the US looks like: Get key actors in a room to work through what would work (and it very hard, time consuming and laborious work where data matters), accepting that, in this case, each side - farming and environmental - would have a de facto veto, and get this onto the decision-making table in time for serious consideration by the policy process. In this case, it also achieved what in the US is almost impossible today - bi-partisan support, which is evident today as the next Farm Bill is being debated.

**A New Party?:** I read in the Farmers Journal (9 August 2023) that 'Three in four farmers would support a farmers party in the next election if one were on the ballot paper'. If you are one of these, just be aware that the only way to have held onto the 250 Kg derogation was to protect water quality and we failed to do that. In the future, the only way to hold onto the 220 Kg derogation will be to reverse the decline in water quality. The

Netherlands has a Farmers Party (BBB), but its farmers have lost access to any derogation – for all Dutch farms, from 2025, the limit will be 170 Kg/Ha – and their new party will not reverse that. I note that in the election in the Netherlands on November 22, 2023, to the House of Representatives, the Farmers Party (BBB) secured 4.7% of the total vote, and 7 seats, 4.7% of the total of 150 seats. [https://en.wikipedia.org/wiki/2023\\_Dutch\\_general\\_election](https://en.wikipedia.org/wiki/2023_Dutch_general_election) What you must have is clear: policies that reward performance that give value for money, directly and unambiguously, and support innovation that finds new and better ways to do so. Apply to those advocating a new party the same tests as you do to the incumbents. If a new party leans seriously in this direction, given it a serious hearing. If not, walk away.

## What? Key Elements of your Pitch to the Irish Policy Process

- 1. The funding available under the CAP is a zero-sum game. Provide New Funding Sources *dedicated singularly* to ensuring that all three ruminant farming systems – dairy, beef, sheep – win their carbon footprint battle, collectively deliver the emissions reductions needed to meet the –25% obligation by 2030, help reduce air and water pollution (especially in nitrates-challenged catchments) and conserve nature.**

There is an Irish precedent for this. To fund the retrofit of 0.5 million residential buildings, in 2021, the Irish Government noted that over the period 2021 – 2030 the planned carbon tax increases may allow for €9.5 billion in additional revenue of which €5 billion will be devoted to household retrofit. See [Blog 9 Policy Essentials Climate Policy for Ruminant Agriculture in Ireland blog 9 | UCD Earth Institute](#) for more details.

The funding can come in the form of subsidies provided either as grants, e.g., analogous to those provided to farmers under the Basic Payments and Rural Development strands of the CAP, or as tax expenditure, the latter defined as the revenue lost which would otherwise have been raised were there no indirect subsidy in the form of a rebate, refund or reduced rate of taxation. The Revenue Commissioners recognizes the following 9 categories of tax, to which tax expenditures can apply: Alcohol Products tax (APT); Capital Acquisition Tax (CAT); Capital Gains Tax (CGT); Corporation Tax (CT); Income Tax (IT); Local Property Tax (LPT); Minerals Oil Tax (MOT); Stamp Duty; Value Added Tax (VAT). The two largest benefitting agriculture in 2021 were under CAT – Farm Relief (€199.7 million) – and Reduced Rate on MOT (Green Diesel) – €522 Million. Of direct relevance for climate performance is the zero VAT rate which applies to fertiliser, provided such fertiliser is supplied in units of not less than 10 kilos. [Costs of Tax Expenditures \(Credits, Allowances and Reliefs\) \(revenue.ie\)](#), p. 2 As you know the rise in chemical fertilizer prices in 2022 is a key reason why emissions of nitrous oxide from farming have fallen. But I noted earlier that, in the year since August 2022, prices have fallen by 45%. It would make all kinds of sense to charge VAT but ring fence it to reward all farmers who reduce emissions, with the refund proportionate to the reduction achieved. (Sue Scott of ESRI recommended this decades ago]

You may have noticed that, in Budget 2024, Minister McGrath provided €110 million of the carbon tax income to support ACRES, and also created an Infrastructure, Climate and Nature Fund [gov.ie - Minister McGrath publishes the General Scheme of the Future Ireland Fund and Infrastructure, Climate and Nature Fund \(www.gov.ie\)](#). He noted that: “€2 billion will be invested in this fund each year from 2024 to 2030” which will “amongst other uses “help to support climate related initiatives over the medium and long term” It is good to see some fresh thinking at this level about funding.

Every farmer in Ireland will benefit if such funding makes a major contribution to driving these objectives, because Ireland as a nation will be, in Food Vision 2030’s language, “a world leader in Sustainable Food Systems (SFS) over the next decade. This will deliver significant benefits...and will also provide the basis for the future competitive advantage of the sector”. Origin Green’s ambitions and claims will stand up to forensic scrutiny if it faces a court challenge and it will ensure that, in the all-important court of mainstream consumer opinion in key export markets, Irish products will continue to be a favourite brand, and in some markets command a premium price. If this is not done, then in the future, you as a farmer face the loss of the 220 Kg derogation opportunity, and a sag in market prices.

However, for those farmers who are relatively income-poor, there is a case for particular generosity as they make the transition to a low carbon farming future, or exit from farming, if this is what they chose. NESCC, 2023. *Just Transition in Agriculture and Land Use*, June: [Microsoft Word - 162 \(nesc.ie\)](#), p.104 recommends the establishment of a Just Transition in Agriculture and Land Use fund, consolidating available carbon tax revenues and other public resources

- 2. These need to be designed and implemented to deliver *outcomes at scale*, with the focus on doing so in ways that are *value for money*.**

Irish farming desperately needs big wins on three fronts (climate, water, nature) if it is to secure its commercial future and to ensure widespread support and admiration for the sector by the Irish public and the mainstream environmental community in the longer term. I’ve taken to asking random Dubliners I encounter what they think of the attitude to climate change of Irish farmers. The typical response has been ‘They want more money’, and (more ominously) in a few cases, ‘They want *our* money’, the latter capturing the idea some Dubliners have that they are the main taxpayers in Ireland. You can win their hearts and minds, but you will need to work at it. They will see it as a good investment if it: delivers greenhouse gas emissions and carbon storage at scale; reduces pollution in the Maigne Deel, Bandon, Slaney, Blackwater, Suir, Nore, Barrow, Slaney, and Boyne catchments to the point where the 220 Kg/Ha derogation is maintained and wins some prominent battles to reversing the decline in nature (wild species and their habitats).

- 3. You must insist that policy (a) supports action where the payoff to effort is greatest (b) pays for performance and/or penalizes non-performance, and (c) brings on board the key actors who are essential to making things happen, which includes farmers food industry politicians and government departments.**

For climate and water this means a special focus on the farmers in the catchments listed above. This will be essential if the emissions reductions are at a scale such that Ireland meets its targets, food companies achieve a competitive carbon footprint in key export markets, and nitrate concentrations in the key catchments are sufficiently low to hold onto the 220 Kg/Ha Nitrates derogation.

For nature conservation, there needs to be a special focus on helping farmers impacting the quality of Natura 2000 sites to do their part to maintain quality and/or reverse decline.

- 4. Innovation is needed to find alternative farming systems that reduce emissions store carbon and reduce losses at acceptable cost, and that also enable existing farming systems to do so.**

In Blog 11 (Innovation) I elaborate on the why and how of this. [Climate Policy for Ruminant Agriculture in Ireland blog 11 | UCD Earth Institute](#).

**5. Learn from others about how to design subsidies that deliver outcomes at scale.**

The state of California is the global leader (since 2015) in the use of cash support to help dairy farmers make the transition. How it does this gives you some insight as to what a serious climate policy looks like. How this works can be discerned from the most recent call for applications for grant support for its alternative manure management program which was released on June 28, 2023, with a closing date of August 28, 2023. Applications were welcomed from individual farmers, dairies, or clusters thereof.

The criteria by which applications will be judged are based on points secured out of 100 allocated as follows:

**Outcomes** (50%): Estimated greenhouse gas emissions reduction (35); Environmental co-benefits 10); Benefits to priority populations (10)

**Quality of inputs** (50%): Project plan and long-term viability (25); Budget and financials (15); Project readiness (10). Details at: [2023 AMMP Request for Grant Applications](#)

In an Irish version of this model: a call would go out to encourage joint applications from coops and/or companies and their farmers to apply (this inclusiveness seems to be the model used by the California Department of Food and Agriculture (CDFA) – see above); Funds would be allocated to those applications who have the most plausible proposals, and would deliver outcomes at scale that provide value for money. My intuition is that many dairy farmers and their coops would be interested, and on the beef side, it seems clear that Dawn Meats ([Sustainability Report - Dawn Meats 2019-2021](#)) and other companies and their farmers would be likewise, for one reason – their incentives are aligned. Both parties can disagree on many things, but both need to hold onto their premium customers, and this means delivering a competitive footprint. In addition, being able at the same time to boast with evidence that water quality has been restored, and bird songs that had disappeared have been restored, would make maintaining the emotional and business ties with premium consumers so much easier.

**6. Longer Term –Other Policy Instrument Choices**

As you know, Ireland’s Department of Agriculture Food and the Marine (DAFM) is continuing to work on a proposal to subsidize a Voluntary Exit/Reduction Scheme to reduce the number of dairy cows. Such a scheme was estimated by the Food Vision Dairy Group to reduce greenhouse gas emissions by 0.45 million tonnes per 100,000 cows. See: The Government of Ireland, 2022: [Report of the Food Vision Dairy Group on Measures to Mitigate Greenhouse Gas Emissions](#), October 25, p.4). My only information on the DAFM proposal comes from Ciaran Moran in the *Farming Independent*, May 30, 2023 – [Revealed: €600m budget needed to cull 65,000 cows every year for three years to meet climate goals | Independent.ie](#). If we assume that both Moran’s cost estimate (€600 million) and emissions’ reductions of the Food Vision Dairy Group report are correct, this initiative would deliver reduction of ~0.9 million tonnes (~16% of total reduction needed by the sector), at an average cost per tonne of >€600 per tonne. This is an intriguing idea, and deserves serious consideration once we know the details. But bear in mind that the enemy is emissions not cows; the ideal policy focusses on the former not the latter.

Other ideas are also evolving and worth monitoring:

*Tax/levy*, informed by lessons from New Zealand; *Green purchasing*, such as favouring low carbon food/high nature conservation products in all government supported food programmes; *infrastructure*, such as accelerated connectivity for wind farms on land leased from farmers, provision of IT support which is essential for carbon-smart farming; *tax expenditure*, such as adjusting capital acquisition tax to favour transfers of farms with low carbon rating, removing VAT exemption on fertilizer and recycling revenues to assist farmers reduce their use of same; *voluntary agreements* such as large farms (>300 cows?) complying on a voluntary basis with provisions of the EU’s Industrial Emissions Directive which inter alia would play very well in a court room; *relaxing zoning and/or planning rules*, e.g. second homes for farms delivering independently documented low carbon, reduce nitrates and high nature value products.

A few of these developments are summarized in Table 8.

**Table 8. Policy Instruments and Core Objectives**

Opportunity	Suggested Policy Instruments		Core Objectives to be delivered		Comment
	By 2025	Future	Commercial	Other Benefits	

Climate and Air Quality	Payment for performance, and nitrates regulation. Innovation strategy in place to drive enteric methane emissions reduction for grass fed farming	Engage positively on ETS option, and lessons from use of levy on emissions in NZ. For farmers above certain size threshold, consider voluntary compliance with Industrial Emissions Directive	Deliver carbon footprint that is competitive with main suppliers to key export markets. In rank order, for: dairy these are EU, UK, US, China (66% of total); beef EU and UK (90% of total) Sheep EU, UK (75% of total). Win any legal challenge to climate performance.	Meet sectoral reduction target of -5.75 million tonnes of CO2e by 2030. Avoid fines for non-compliance with ammonia and climate (Effort sharing directive) obligations. In good standing with some mainstream env organizations and Irish public	The EU Commission has recently released a consultancy report which explores and assesses alternative ways of designing and delivering an emissions trading scheme for the sector. <a href="#">Pricing Agricultural Emissions and Rewarding Climate Action in the Agri-food Value Chain   Climate Action (europa.eu)</a> .
Water	Payment for performance and nitrates regulation	Consider mandatory N-reduction action by all farmers above a size threshold	For derogation farmers, retain the 220 Kg/Ha concession at next review.	Appreciation from current recreational and other users for whom high water quality is important.	Reduce nitrate concentrations in the Maigne Deel, Bandon, Slaney, Blackwater, Suir, Nore, Barrow, Slaney, and Boyne catchments.
Nature Conservation	Payment for performance		Product from Low carbon and high nature farms should be able to hold onto premium markets	Deliver long-term protection of key Natura 2000 sites and meet the 20% obligation by 2030 in the EU Nature Conservation Law	See 'The Status of EU Protected Habitats and Species in Ireland, 2019' <a href="#">Microsoft Word 01_AR1719_hab_1110_Sandbanks.docx (npws.ie)</a> ' for priority areas

#### F. How? Delivering the Irish Policies You Need to Succeed.

An outsider giving farmers advice on how to influence politicians is like teaching one's grandmother to suck eggs, i.e., the naïve advising the experts. Treat what I have to say below accordingly!

You must find ways that work to get policies in place that will maximize your prospects of transitioning both your farm and your coop/company to a place where their performance on climate, water quality and nature conservation is such that your products and how you produce them are cherished by premium customers abroad and esteemed at home by the public. To make this transition successfully, you need new Irish policies: To get these, you first need to get serious attention of serious politicians, and secondly, you need ensure that they instruct the four key departments – namely Taoiseach, Finance/Public Expenditure, Environment Climate and Communications, and Agriculture Food and the Marine – to give them policy instrument mix/choices that would maximize your prospects of making this transition successfully.

#### Getting the Serious Attention of Serious Politicians

In the end, politicians are the key decision-makers as to what policies are enacted and funded. Many of them are heavily influenced by proposals that are coherent with clear ambitions and pathways to get there, will deliver a range of commercial, social and climate and environmental ambitions, and have wide and deep support from key influential interest groups.

In theory, the farm organizations would be your champion on this front. They are 'in the room' when key decisions are being made and have ready access to power. They have not made the case for you that I make above, and the reason is simple: you have not demanded it. In the end, they are constituency organizations who take their cues from their members, and they have not been hearing a strong and coherent grass-roots voice making the case. The closest to a publicly available strategy by an Irish farming organization is the Thomond 6-point Declaration issued in April 2023 by the Irish Farmers' Association (IFA), which was sent to all TDs and senators. [IFA-Thomond-Park-Declaration.pdf](#). Ignore the first 5 and focus on the 6<sup>th</sup>.

"New funding is required to support farmers and the wider agricultural sector to achieve our environmental objectives. This must include renewable energy as well as research funding to maximise the potential for technology-based solutions to help agriculture reduce emissions, protect water quality and enhance biodiversity".

I agree that new funding is required but to say that 'renewable energy as well as research funding to maximise the potential for technology-based solutions to help agriculture reduce emissions, protect water quality and enhance biodiversity' is inadequate as means of guaranteeing your future commercial competitiveness is a vast understatement, but it is a start: you should use it to build out the policies that you must have if

you are to succeed. In the longer term, it is worth nudging your farming organization towards an Irish version of the very successful Food and Agriculture Climate Alliance (FACA) lobbying model I describe above. However, this would take time and your needs are urgent.

In parallel, it is worth considering direct visits with TDs. At present there are 160 of them, but their numbers will grow to 174 before the next election due to the rise in population and associated constituency revisions, with much of this growth happening in urban areas – see p. 12 Table 1 for proposed new constituency list [constituency-review-report-2023.pdf \(amazonaws.com\)](#) and Constituencies [MAP A - IRELAND\\_840X594.indd \(amazonaws.com\)](#).

Respect the fact that TDs are incredibly busy by giving them a clear message as to what you need, and why delivering it is hugely in the public interest before you meet. If you can, get members of your family living in cities to visit their TDs on your behalf. If you convince Hill 16 to roar on your behalf, it is job done.

### **Their Realities**

You know that the first step in convincing any very sceptical audience is to first put yourself in their shoes and empathize with their needs, challenges and priorities:

- Most politicians everywhere welcome proposals that have broad support – in democracies, being on the same page as a lot of voters is something most are interested in. For them, Andy Grove’s ‘only the paranoid survive’ is not a remote concept – it is lived reality.
- They welcome input that helps them well before decisions are locked into place, so that they have real choices to consider.
- They know that demands are infinite and that resources are therefore always scarce; When you have a case to make, keep it short, and make it as clear as possible why there is a public interest in doing what you recommend, why it is very good value, and (ideally) here is how to do it. In the Irish context, securing support from the Departments of the Taoiseach, Finance, and Public Expenditure and Reform will make success more likely and more sustainable.
- Notwithstanding the cynical view that most ‘are in it for themselves’ or will bow to the loudest and most virulent voices in the room, or those with the deepest pockets, this is not true of most Irish politicians, who want to do the right thing and to find ways that work to be, and to be seen to be, climate responsible and at the same time maintain the economic and social vitality of rural Ireland.
- For this reason, many tend to like folk who are in command of the evidence, who can both speak to their own needs and experience, but also frame their case-making convincingly as contributing to important national agendas and ambitions.
- A lot of them have a strong bias in favour of folk that are doers rather than talkers about doing, and pay particular attention to those who are voters in their constituency.
- They and their parties (if they have one) have research capacity and resources to which they will refer your ideas to check the validity of your advocacy, and strategists who will advise them on the politics, broadly defined. Your evidence can make their jobs easier.

### **Getting their Attention**

You need to put together a simple message before you engage that has some of the following elements:

**What you are already doing:** your base line performance (emissions and carbon and average national footprint), the state of the catchment into which ‘surplus’ nitrates from your farm and thousands of others flow. Doers will be listened to with far more respect and attention than writers and talkers like me.

**The gap** between what you can do on your own and with the help of existing policies, and where you need to be to: (a) successfully manage the carbon footprint competition risk you are likely to face in some premium export markets (b) do your share in meeting both the -25% emissions reduction target and the emerging target for carbon removal and reducing carbon losses

**What you must have:** new dedicated Irish policy that: **directly and unambiguously** rewards emissions reductions and carbon removal/reduction of carbon losses at scale and improvements in water quality and nature conservation in ways that work for farmers and for taxpayers (value for money) including support for group funding for farmers and their co-ops/industry together; seeks out new and cheaper ways in which to make progress (**innovation**).

### **Point out some possible/likely consequences of inaction.**

- At the MACC launch: Unless there is a step change in rate of take up, Irish farming will fail to: deliver emissions reduction at scale and will fail to deliver on the Food Vision 2030 ambition of global leadership and the government’s emissions reduction target.
- The commercial future of Irish farming depends on the extent to which it holds onto the premium markets it has secured in its top four markets, and over time increases its share of such markets. About 90% of Irish milk and meat is exported, with exports in 2022 valued at >€10 billion of which ~78% went to consumers in the following four jurisdictions (% of total in brackets): Rest of EU (41.5%); UK (25.7%); US (6.6%); China (4.3%). You are a ‘metrics taker’ from these jurisdictions and will have no choice but to compete on their terms.
- Derogation farmers are likely to lose their 220 kg/Ha derogation unless there is step change improvement in the water quality of key catchments at the next review.
- A court case that successfully challenges Irish food’s green credentials

- The economic and social vitality of rural Ireland is in danger of leaking away unless the policies you need are delivered quickly and efficiently, and the decline will be most notable in those constituencies that are most farming-dependent.
- Origin Green and Bord Bia are great promoters of Irish food. It is government's job to ensure that they have a hand that enables them to deliver this to maximum effect.

You need an edge, or you don't survive.

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## Biography

**Frank Convery** has degrees [B. Ag and M.Ag (Forestry)] from UCD. Encouraged by the late Seamus Sheehy, he went to the US and took a PhD in Forestry Economics (State University of New York). After a distinguished academic career in the US (Duke University) he returned to Ireland as research professor at ESRI before being appointed as Heritage Trust Professor of Environmental Studies at UCD where he led the successful application for the funding of the UCD Earth Institute. He chaired the boards of the Sustainable Energy Authority of Ireland (SEAI) (2002–2007), Comhar Sustainable Development Council (2006–2010) and served on the Climate Change Committee (2016–2020) chaired by John FitzGerald, and the AgriFood 2030 Committee chaired by Tom Arnold. The latter produced *Food Vision 2030*. From 2014 to 2018, he was chief economist with the Environmental Defense Fund, New York. His passion is finding ways to bring the weight of learning down to where things are done; his ambition for the sector is the same as Food Vision 2030's: "Ireland will become a **world leader** in Sustainable Food Systems (SFS) over the next decade. This will deliver significant benefits...and will also provide the basis for the future competitive advantage of the sector".

## Footnotes and references

[1] Government of Ireland. 2023. *Land Use Evidence Review Phase 1 Synthesis Report*, March, p. 83

[2] You can see the proposed new constituency boundaries at: [Dáil & Euro Constituency Review 2023 Recommends 14 More TDs & the Reinstatement of County Boundaries – Electoral Commission](#)

[3] [InfiniteMIT | Andrew Grove, "Exploiting the Crisis Points: Challenging Every Company and Career" – MIT Sloan Industry Leaders Lecture](#)

[4] [CountryWide Saturday 12 August 2023 – CountryWide \(rte.ie\)](#) focussed on farming in the River Barrow Catchment, which is one of the catchments suffering from excess nitrates and deteriorating water quality: Ella McSweeney interviewed Joe Whitty, a dairy farmer who supplies organic milk to Glenisk, so he does not apply any artificial fertilizer, and is not contributing to the Barrow's nitrates' overload. But the fact that he

imposes negligible pressure on water quality is neither here nor there in determining the river's status; its quality will only improve if most farmers in the catchment act to reduce nitrogen losses. Economists call this 'the tragedy of the commons'. Elinor Ostrom (1933–2012) was awarded the Nobel Prize in Economic Sciences in 2009 for her analysis of economic governance, especially the commons.

[5] Blog 9 Policy Essentials: [Climate Policy for Ruminant Agriculture in Ireland blog 9 | UCD Earth Institute](#); Blog 10 CAP 2023–2027: [Climate Policy for Ruminant Agriculture in Ireland blog 10 | UCD Earth Institute](#); Blog 11 Innovation: [Climate Policy for Ruminant Agriculture in Ireland blog 11 | UCD Earth Institute](#); and Blog 12 New Policies: [Climate Policy for Ruminant Agriculture in Ireland blog 12 | UCD Earth Institute](#)

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