



Rural Ireland on the move: farm diversification and just transition



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This report was created to lay groundwork in the lead up to events on just transition and rural diversification in Cloughjordan Ecovillage, Tipperary. The process involved researching and writing the initial report, then reaching out to contributors in the areas of just transition and diversification in a rural and farming context. To include a broad range of perspectives on the relevant topics, a request to contribute to this report was sent to approximately 50 people including farmers, academic researchers, agricultural organisations, and think-tanks. A select number of contributions were then synthesised into this paper. Contributors have been invited to attend the 'Just a Just Transition' and 'Diversify Diversification' events in April 2022 to discuss these topics further and progress the conversation around them.

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Summary

While it was initially associated with the labour movement, the term ‘just transition’ has become an integral element of climate action. It means that no person, community, or sector of society should be ‘left behind’ in our transition to a carbon neutral society. Central Statistics Office [data](#) shows that per capita, Ireland’s emissions of greenhouse gases were 53% higher than the EU28 average and the second highest in the EU. The Climate Action and Low Carbon Development (Amendment) Act 2021 commits Ireland to reducing overall greenhouse gas (GHG) emissions by 51% by 2030, and to achieving a “climate resilient, biodiversity rich and carbon neutral economy by no later than the end of the year 2050.” To achieve this, Ireland will need to restructure and reshape all sectors of its society and economy.

Ireland’s agri-food sector, which employs 164,400 people (7.1% of the workforce), will be key to this. It’s not a stretch to say that this sector contributes much

more economically, socially and culturally than other high performing aspects of the Irish economy, such as brass plate corporations in Dublin’s docklands.

Agriculture is however responsible for 37.1% of Ireland’s greenhouse gas emissions, according to data from 2020. Reshaping this sector, while managing the process in such a way that livelihoods are maintained, developed and thrive, will be a key challenge of the months and years ahead.

This report broadly looks at how a just transition is progressing so far in rural Ireland, and reviews the potential for agricultural and rural diversification in a just transition to a carbon neutral society. It aims to further the discussion of how a just transition in Ireland can support the agri-food sector in producing nutritious food, creating rural employment and enhancing rural life, while also providing public goods like carbon sequestration and biodiversity.

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“ Graduates of this programme are in high demand because there has been an upsurge in jobs within the food industry in the area of sustainability and sustainable food production.”

MICHAEL CRONIN, CHAIR
AGRIFOOD BUSINESS PARTNERS

Introduction

The term ‘just transition’ has come to the fore of the climate conversation in Ireland. But what exactly is a just transition, whose lives does it touch, and what might a just transition look like for our farming and rural communities?

In 2022, Ireland’s agricultural sector is facing many strains, such as rising input costs, food and fodder security concerns, adjusting to climate targets, and supply shortages because of war in Ukraine. At the same time we are looking to the agricultural sector to move towards more climate and ecologically friendly practices. How can farmers and rural communities meet these needs while also being guaranteed a good livelihood? Working within a global,

market-driven food system has resulted in many regions becoming more specialised in their agricultural output, because products can be easily distributed across the globe. But how will this system develop and adjust to the crises it faces? And what level and type of diversification makes sense in the context of these crises?

With a shifting context, constantly assessing and re-assessing aspects of our agri-food system — as our exposure to fertiliser and feed markets bites, as our climate and biodiversity targets become ever harder to achieve, and as extreme weather events become more common — will be critical, both here and elsewhere.



The Ukraine is a major supplier of grain for food and animal feed to Ireland, and war there has raised concerns over food security. Photo © Natalia Mamonova

Introduction

A concern is that, as with Covid 19, the war in Ukraine may provide a pretext to delay important actions to try to bring about a genuine just transition. Already, at EU level there have been delays and adjustments to some core aspects of the EU Green Deal. Both the [Nature Restoration](#) and [Pesticide](#) Regulations have been delayed, while Ireland may avail of [changes at EU level in rules on fallow land](#). The latter will have [potentially negative biodiversity impacts](#) and has not even been assessed in any significant way.

This report sets the context for two policy-focused events taking place in Cloughjordan Ecovillage during April 2022: ‘Just a Just Transition?’ and ‘Diversify Diversification’. These events aim to critically assess what a just transition and diversification will mean for rural Ireland, and how they might unfold over the coming years.

Both events, and this report, aim to build on the [‘Towards a New Agricultural and Food Policy for Ireland’](#) paper published last year by the Environmental Pillar, Stop Climate Chaos and the Sustainable Water

Action Network, and the [‘Feeding Ourselves’ policy workshop and report](#) delivered by ARC2020, [Cloughjordan Community Farm](#) and [Cultivate](#).

Throughout this document, you will see contributions we have received from various stakeholders. These perspectives do not necessarily reflect the views of the report authors. Moreover, the report itself does not necessarily represent the views of the organisations that have supported it.

The idea is to bring together perspectives and develop thinking on these two important topics, both of which will help to shape Ireland’s place in the world over the coming decades, in conjunction with the two events.

We would like to thank ARC2020, the Environmental Pillar and its member organisations Sustainable Projects Ireland and Cultivate, as well as UCC’s Centre for Co-operative Studies, for supporting this report and its development.



Cloughjordan Ecovillage, home of Cloughjordan Community Farm and the WeCreate Community Enterprise Centre, where events on rural diversification and just transition take place in April 2022. Photo © Eoin Campbell (Sustainable Projects Ireland)



Just Transition

Why a just transition?

A just transition has come to [mean that](#) no person, community, or sector of society should be ‘left behind’ in Ireland’s transition to a carbon neutral society. The term has its roots in the international labour movement, [meaning](#) no livelihoods should suffer when policy changes occur.

For the agri-food sector, a just transition means that [“no farmer should be left behind”](#) when implementing policies to reduce greenhouse gas (GHG) emissions line with Ireland’s [Climate Action and Low Carbon Development \(Amendment\) Act 2021](#) (hereafter referred to as the Climate Act). A just transition is also essential for the wider array of businesses, livelihoods and communities that depend on our farming sector. “It should be kept in mind that we are examining transitions in progress, and that there are no ready-made templates of successful, completed, transitions to a zero-carbon economy,” [says](#) (p4) Sinead Mercier, planning and environmental law lecturer at [UCD](#).

In Ireland until now, the term ‘just transition’ has mainly applied to the peat extraction sector in the Irish Midlands. The Irish government ended peat harvesting for power stations in 2021, to reduce greenhouse gas emissions and end the destruction of raised bogs. This had a profound impact on people’s lives in the midlands.

“The peat industry, power generation and industrial heritage have been hugely significant for the Midlands region economically, culturally and socially,” according to Ireland’s [draft Territorial Just Transition Plan](#). Entire villages, such as Kilcormac in County Offaly, were centred on the peat industry. To mitigate the negative social and economic consequences, [just transition funding](#) has supported 350 jobs in peatland rehabilitation and invested €108 million in affected areas, with a further €18 million coming from Bord na Móna. This [process has been overseen by Ireland’s Just Transition Commissioner, Kieran Mulvey](#).

Despite its ambition, there has been some criticism of this process. For example, in July 2021 the campaigns officer for the Irish Congress of Trade Unions (ICTU), Macdara Doyle, [commented that](#) “very little money has actually got through being delivered on”.

The Just Transition Alliance [declaration of March 2022](#) states that “to date, over 1,000 jobs have been lost in the sector and there has been a signal failure to create new, replacement jobs and quality employment opportunities for the affected workers and communities, in a manner consistent with just transition. This contrasts sharply with far more positive experience of transition for workers and communities in Spain, Germany and Australia, for example.”

[Reports](#) of significant amounts of peat being imported into Ireland from other European countries have also [ignited frustration](#). In this context, the need for a just transition commission (see following page) is strong.

The key components of a just transition

By the Just Transition Alliance

The [Just Transition Alliance](#) continues on the historical partnerships between trade unions and environmental campaigners that began in the 1990s. Founding members include Irish Congress of Trade Unions, SIPTU, Forsa, Friends of the Earth Ireland and TASC.

A just transition is required to protect and create jobs, reduce emissions, enhance living standards and generate new opportunities that will help to build sustainable, resilient communities across the country. A just transition also provides the most effective means to safeguard and restore biodiversity, at a national and international level.

The position of the alliance is informed by policy and best practice guidelines from both national and international organisations, in particular the clear guidelines on the implementation of a just transition drawn up by the International Labour Organisation (ILO). According to these guidelines, the key components

for a just transition at a national level are building social consensus, the centrality of social dialogue, the creation of decent work, social protection, and skill development. According to the JTA, it is critical to adopt this global framework to maintain worker and public confidence in the transition process.

The JTA does not accept that job loss and lower living standards are the automatic outcome of the transition process, but result instead from bad planning and poor policy. However, the transition will become exceptionally difficult to deliver should it become synonymous with job losses and poorer communities.

Instead, the alliance says that the single most effective means of achieving and delivering change is by working collaboratively and through social dialogue to ensure that all climate policy and action is framed and underpinned by the practice and principles of just transition.



The Just Transition Alliance says that building consensus, and social dialogue with affected sectors such as agriculture, are critical for a just transition across the country. A just transition also provides the most effective means to safeguard and restore biodiversity, at a national and international level. Photo © Oliver Moore

The key components of a just transition

The alliance has called for the Irish government to establish a national just transition commission to oversee a just transition that is based on social dialogue, and also aligns with the ILO guidelines and the UN's sustainable development goals.

The [Joint Declaration of the JTA](#) references Ireland's just transition pledge from COP26 which explicitly promotes social dialogue and the creation of decent work as part of the transition process. Supporting the target to reduce emissions by 51% by 2030, the JTA calls on the Irish government, as a matter of urgency, to:

- Establish a national just transition commission, in advance of formal legislation, based on social dialogue and comprised of representatives of government, trade unions, employers, affected communities, and civil society. This commission would be charged with developing the national framework and blueprint for just transition covering the entire economy, in line with the ILO guidelines for a just transition.
- Focus the work of the commission on job retention, protection of living standards, skills development, the creation of decent work in respect of new employment opportunities arising from the transition — particularly in the renewable energy sector — underpinned by a commitment to genuine community and regional development;
- Ensure that those sectors of the economy and those regions that are most vulnerable to change are prioritised under the just transition process;
- Develop a new overarching policy and strategy for the energy sector that ensures the maximum retention of key energy assets in public ownership and a leading, strategic role for the state in the development of renewable energy;
- Align this process with commitments of the United Nations' Sustainable Development Goals (particularly SDG 7) on ensuring “access to affordable, reliable, sustainable” energy for all. To this end, it is critical that energy is officially designated as an ‘essential public good’, like health or education, and that there is a guarantee of access to affordable energy as a core policy priority of government.

The Just Transition Alliance is a coalition of unions and environmental groups dedicated to achieving effective climate action without adverse impacts on jobs and communities. It is comprised of the Irish Congress of Trade Unions, Friends of the Earth, SIPTU, Fórsa and the Stop Climate Chaos Coalition.

Climate action targets

Climate action targets

[Figures released in 2021](#), for the period 1990-2019, show that by 2019 Ireland had the second worst emissions of greenhouse gases per capita in the EU at 12.1 tonnes of carbon dioxide equivalent per capita. This was 53% higher than the EU28 average of 7.9 tonnes. The Climate Act commits Ireland to reducing overall greenhouse gas (GHG) emissions by 51% by 2030, and to achieving a “carbon neutral economy” by 2050.

Each sector of the economy has been assigned specific GHG reduction targets. The agricultural sector has been tasked with reducing its emissions by 21-30% by 2030, compared to 43% for the transport sector, 37-58% for land use, land use change and forestry, 62-81% for the energy sector, and 29-41% for industry.



cc-by-sa/2.0 - Cattle Farm at Beal by James Emmans - geograph.ie/p/4683414

Under the Climate Action Plan, agriculture must reduce its emissions 21- 30% by 2030, while the energy sector must achieve a 62-81% reduction, with wind energy likely to play a major role. Photo by James Emmans and available under a Creative Commons Licence.

Agriculture was directly responsible for 37.1% of Ireland’s GHG emissions in 2020, according to the Environmental Protection Agency (EPA). These emissions mainly consisted of methane from livestock and nitrous oxide from nitrogen fertiliser and manure management. The [EPA highlights](#) that between 2015 and 2020, agricultural emissions rose by 10%.

Alongside legally binding targets, the [Climate Action Plan](#) acknowledges the need for a “just transition to a climate neutral economy” which aims, “in so far as is practicable, to— (i) maximise employment opportunities, and (ii) support persons and communities that may be negatively affected by the transition.”

Identifying new income opportunities

Helping rural communities to identify new income opportunities, and more ecologically embedded practices, will be a key part of a just transition, linking with the “farmer and community-centred” approach called for by the three environmental coalitions in their ‘[Towards...](#)’ paper, which advocates for farmers to be adequately compensated for “any radical or abrupt changes” and supported with policies that provide “stable incomes through diversification.”

A degrowth transition that prioritises human flourishing

By Prof. Peadar Kirby

The focus on a just transition that has emerged in the Climate Action Plan and in the Climate Action and Low-Carbon Development (Amendment) Act 2021 is very welcome. It adds an essential focus that the benefits and disruptions of the transition are shared as equitably as possible. The Plan adopts the ESRI definition of the just transition as “one that seeks to ensure transition is fair, equitable, and inclusive in terms of processes and outcomes”. The Act simply specifies that the “just transition endeavours, in so far as is practicable, to maximise employment opportunities and support persons and communities that may be negatively affected.”

The focus therefore is on ensuring that the transition is just rather than on the nature of the transition being undertaken. The latter is understood as being a transition “to a climate neutral economy” (in the Act) or, in the plan, to net-zero emissions no later than 2050. Yet, the extent to which the transition is going to be just depends very much on how disruptive and radical are the changes that will be required to make this transition.

A central issue relates to inequalities which have emerged as major issues of public concern, debate and mobilisation of late (gender, racial, socio-economic). Yet, revealingly, principle three of the Climate Action Plan’s just transition framework requires that “the costs are shared so that the impact is equitable and *existing inequalities are not exacerbated*” (emphasis added). The clear implication is that the just transition is limited to ensuring existing inequalities don’t get worse due to the low-carbon transition. It doesn’t see that the just transition should reduce existing inequalities.

What this points to is that the transition is seen as happening within the paradigm of the existing model of society based on economic growth. Indeed, nowhere in the government’s plans for a low-carbon transition is there any recognition of the fact that economic growth is the principal driver of emissions, nor of the mounting evidence that decoupling growth from emissions is simply not happening at a level sufficient to allow us meet our emissions targets.

The ecological economist Tim Jackson explains it very simply in his book [‘Post Growth: Life After Capitalism’](#): “If the GDP is growing faster than the carbon content of the GDP is declining then overall there will be more carbon going into the atmosphere this year than there was last year. So far that’s exactly what has happened.”

Even limiting ourselves to the issues of reducing inequalities and moving away from growth as the objective of economic activity raises fundamental questions about how the transition is conceived in policy terms. As is clear from the Stockholm Resilience Institute’s identification of planetary boundaries, if we succeed in the Herculean task of arriving at net-zero emissions by 2050, this will in itself do little to bring us back within the boundaries for biodiversity loss, deforestation, and biochemical flows. [And just last January, researchers linked to the Institute identified a further boundary that was surpassed](#) – chemical pollution, especially that caused by plastics. All of this evidence raises major questions about the nature of the transition we need to undertake and what it might mean to ensure it is just.

The only adequate way to conceive of this is paradigm change, a move from the techno-economic paradigm that currently dominates the policy horizon to an eco-social paradigm. Central elements of the new paradigm must be a degrowth economy dedicated to human well-being and flourishing rather than to producing more and more products, living within planetary boundaries while ensuring basic social needs are satisfied (as outlined in Kate Raworth’s ‘doughnut economics’), relocalisation within global connectivity and ethical principles, and the rediscovery of the art of community. [There is no better guide to what this ‘great transformation’ entails than Karl Polanyi](#), especially his central challenge to decommodify land, labour and money. Here lies the seeds of what would really be a just transition.

Peadar Kirby is an author, educator, and an academic. He is a former professor of international politics at the University of Limerick.

Employment vulnerability

In 2020, the government requested that the National Economic and Social Council (NESC) examine the vulnerability of workers, firms and sectors to the zero carbon and digital transitions, and provide relevant recommendations. [NESC's 2020 report](#) concludes that addressing employment vulnerability “must be part of a wider vision, a direction of travel for where Ireland wants to get to.”

In response to possible job losses related to the carbon and digital transitions, NESC recommends three drivers to the government’s approach:

- Continuous, pre-emptive workforce development
- Building resilient enterprises, and
- Delivering high-impact targeted funding to support transition

The report says that to ensure a just transition, it will be essential to provide support for people, businesses, and communities by facilitating “lifelong learning, training and education, effective support for viable but vulnerable companies” as well as “ensuring that [just transition] funding has the greatest possible local impact.”

NESC underlines the need for a bespoke approach to tackling employment vulnerability. It says that, “there is no readily available template, recipe or off-the-shelf approach. Every town and region will have its own context and past experiences that will and should shape the response to transition.”

In 2022, the Irish Government requested that NESC undertake research on climate and agriculture, linked with action #384 in the Climate Action Plan (to “conduct research and engage on how to support climate just transition in agriculture”). In response to this request, the group emphasised [a three-pronged approach](#) in its January 2022 Dáil submission:

- Understanding how climate action and transition is understood within the sector, with a focus on both opportunities as well as concerns, including from an economic, environmental and social perspective.
- Assessing the strengths and weaknesses of possible policy levers to support climate action and transition, including for example advisory services, market requirements and economic instruments.
- Examining the options, alternatives and costs in supporting ambitious climate action, mapping existing innovative approaches and situating action within a broader rural development perspective. For example, climate action resources, such as retrofit or renewable energy supports, can be a catalyst for rural communities.

This can be seen as framing action, mapping options and assessing levers for change. NESC is now engaged in stakeholder collaboration on a just transition for agriculture, and rural resilience, and will report on its work in 2023.

Overall, a just transition in the farming, food and rural context should be considered more than just a way to maintain livelihoods, but to reimagine a better future for farmers and their communities. “Our thinking needs to be broader, more connected, more creative and more considerate of real people in situ — people who might be left out otherwise,” [according to Seán McCabe of the Think-Tank for Action on Social Change](#) (p12).

Employment vulnerability



*A just transition for the Irish agri-food sector can be a gateway that leads to a better future for rural communities.
Photo © Oliver Moore*

Approaches to a just transition

Bespoke & bottom-up: people and places, capacities and capabilities

In its report '[The People's Transition](#)', TASC says (p9) that a just transition is “rooted in social dialogue and the participation of those affected, at every stage of the process.” The group recommends a “bottom-up”, transformative, and inclusive approach. A bottom-up approach means giving everyone the space and voice to design “new climate actions, share information, launch grassroots activities and showcase solutions that others can follow.” (p4)

With these foundations, TASC suggests a “capabilities approach”. Pioneered by the economist-philosopher Amartya Sen, the capabilities approach is employed in the field of international development. TASC says that it is underpinned by the following assumptions:

- “there is a moral imperative to enable people the freedom to achieve well-being” and
- “that the freedom to achieve well-being is understood in terms of a person’s capabilities – the opportunities they have to do or be what they have reason to value.”

This would empower individuals, businesses and communities to identify viable opportunities, which they feel capable of pursuing, and which produce outputs they value. For example, while community-owned and locally-generated renewable energy may appeal to one community, an agri-tourism co-operative may be more appropriate for another. [Sinead Mercier](#), just transition researcher and environmental law lecturer at UCD, says that (p115), “transitions are complex. A good approach tends to be place-based, context-specific and cognisant of regional differences.”

Relatedly, in [Exploring Place-based Opportunities for Policy and Practice in Transition](#) (forthcoming 2022), Niamh Moore-Cherry, Alma Calvin and colleagues, emphasise appropriate place-specificities. Their capabilities approach posits that just transition “must

start with identifying rights holders, stakeholders and community members and developing common understanding of what a just transition means for them, where they live and work.”

The emphasis here is on dialogue and engagement to “identify place-based assets, opportunities and challenges for a just transition”. Concurrently, “national support and empowerment for local-regional just transitions planning and development is critical” (pg V-VI).

Recommendations include building capacity and capabilities; ensuring appropriate governance, delivery and monitoring; engagement and context specific co-creation; a re-imagined urban-rural relationship with policy, practice and funding; government leadership, accountability and innovation; equality-proofing environmental actions; and bespoke, geographically specific, well-audited approaches.

The importance of participation

NESC’s [2020 report](#) highlights that a just transition means “a commitment to a participative process of in-depth exploration with stakeholders and those experiencing the transition and change first-hand.” Similarly, '[Towards...](#)' calls on the Irish government to “involve those affected by policy changes to identify sustainable alternatives, with support and input from the wider community and civil society working collectively toward rapid and fair solutions.”

Oonagh Duggan of Birdwatch Ireland and the Environmental Pillar [says that \(p13\)](#), “the conversation on just transition needs to start now. We need farmer champions for change, they’re out there but don’t have a voice as much as others. And we need public engagement: ask people what they want from agriculture. Society is paying for those subsidies and for the clean-up.” Davie Philip, a trainer and community climate coach at Cultivate, agrees that (p44) “we urgent-

Approaches to a just transition

ly need bottom-up frameworks that put people and local communities at the heart of the transition which – if not fair and inclusive – will not be made at all.”

Policy interventions for a just transition

It will be essential to listen to those living the reality of a just transition to ensure that the process is fair and effective. Ireland’s draft [Territorial Just Transition Plan](#) (2021), [recently went through a public consultation](#). The plan accesses EU funding for regions that may be negatively impacted by climate action.

How widespread and inclusive was this public consultation? Understanding the rationale behind how this funding was awarded will be critical to analysing how the just transition process is working (*see box below*).

In 2020, the National Just Transition Fund (JTF) [awarded a total of €20.5 million in grant funding](#) to projects relating to a just transition. The categories funded were:

- Business development
- Education, training and upskilling
- Development of co-working and enterprise hubs,
- Renewable energies and retrofitting
- Tourism, heritage and restoration
- Community development and capacity building, and
- Greenways and Walking.

Tourism, heritage and restoration received the largest amount assigned to one category. Only one project directly related to food production was awarded funding: Real Leaf Farm, which was allocated €1,000,000 for a new hydroponics facility for salad produce in County Offaly.

Question: How can we evaluate whether just transition is working for rural communities?

Can we critically assess and learn from the just transition currently being applied to peatland communities in the Irish midlands? How can we improve this process?

TASC says that policy interventions are needed throughout the food supply chain to facilitate a just transition and a capabilities approach. These interventions include: building climate resilience for farmers, resources for farmers to deliver diversification and climate-smart practices, more participatory decision making, practical education in the development of co-operative models and social enterprises, and targeted grants for community-led businesses.

Some recent policy interventions include the [ring-fencing of €5bn of carbon tax funds for the national retrofit programme](#), and of €1.5bn to [“incentivise farmers to farm in a greener and more sustainable way”](#).

Specific policy interventions would enable farmers to diversify their production in line with priority national policy areas such as bio/circular economy, energy production, tourism, and food, [according to](#) David Meredith of Teagasc.

Approaches to a just transition



TASC says policy interventions are needed throughout the food supply chain to facilitate a just transition, including resources for farmers to build climate resilience and diversification. Photo by Pascvii Freisen

Policy framework

A policy framework for a just transition is laid out in the [Climate Action Plan](#) (p38). It is based on four principles:

- An integrated, structured, and evidence-based approach to identify and plan our response to just transition requirements
- People are equipped with the right skills to be able to participate in and benefit from the future net zero economy
- The costs are shared so that the impact is equitable and existing inequalities are not exacerbated
- Social dialogue to ensure impacted citizens and communities are empowered and are core to the transition process.

Meanwhile, the Institute for European Environmental Policy, a sustainability think tank funded by the EU LIFE Programme, [outlines ten “key components”](#) of a balanced just transition for agriculture:

- Enhanced engagement with the farming and land managing communities, including agricultural workers
- Preparatory, analytical and supportive work
- Building knowledge, skills and capacity
- Fair terms and fair prices for farmers in the food chain
- Developing new income streams and markets for sustainable activities
- Better use of CAP basic payments to support greater environmental sustainability
- Targeted supplementary transition aid
- Fairness between Member States, re-align the distribution of the CAP budget with the requirements of the transition
- Fairness for rural communities
- Fairness amongst consumers

Stimulating diversification through a well-being economy

By Caroline Whyte, Feasta

High-level EU policies have clearly had a profound influence on farming in Ireland over the past five decades. When considering how these policies could be improved or replaced, it's worth examining the goals that underpin them.

One of these core goals, aggregate GDP expansion — listed among the core EU tasks in both the Treaty for the European Union and the Treaty for the Functioning of the European Union — needs to be rethought. This is because, whenever economic growth is a goal, it requires the adoption of a productivist approach in all sectors of the economy, including agriculture. Yet a substantial body of research over the past few decades has highlighted the [many serious environmental problems with productivism](#).

As the April 2021 joint Environmental Pillar/SWAN/ Stop Climate Chaos working paper '[Towards a New Agricultural and Food Policy for Ireland](#)' states, "current policies that prioritise a productivist model of agriculture...lock farmers into an unsustainable commodity-driven food production system."

A major challenge to moving away from productivism is the widespread belief that if economic production does not constantly expand, the economy will invariably run into financial difficulties. This belief is reflected in Article 39 of the [Treaty for the Functioning of the European Union](#), which lists as the first two objectives of the Common Agricultural Policy:

- (a) to increase agricultural productivity by promoting technical progress and by ensuring the rational development of agricultural production and the optimum utilisation of the factors of production, in particular labour;
- (b) *thus to ensure a fair standard of living for the agricultural community* [our emphasis], in particular by increasing the individual earnings of persons engaged in agriculture.

Objective (a) of the CAP clearly needs to change. However, objective (b) remains vital to the future of EU agriculture. So the challenge is to identify ways to de-emphasise (a) while simultaneously achieving (b).

Objective (a) conjures up images of Adam Smith's famous, albeit imaginary, pin factory in which labour is divided up to the greatest extent possible in order to try to maximise productive efficiency. In agriculture, this extreme division of labour is intimately linked to the use of fossil fuels. Fossil fuels make high volumes of freight transportation feasible, they provide synthetic fertiliser and enable machinery to easily replace human labour on farms, and they help larger retail food sellers to undercut local markets. Put bluntly: they can be extremely useful for increasing productivity, yet they are toxic for diversification and the just transition.



European Solidarity Corps volunteers at CloughJordan Community Farm. A declining national cap on total reactive nitrogen usage and overall fossil fuel use could help to trigger the development of labour-intensive, community-supported agriculture schemes. Photo © Pat Malone.

Stimulating diversification through a well-being economy

[Feasta](#) members argue that environmental regulations need to include ‘upstream’ measures that would directly diminish fossil fuel use, such as imposing a declining cap on total national reactive nitrogen usage (which is one of the recommendations

in the ‘Towards’ paper). We also advocate for a declining cap on overall fossil fuel production and imports. This would have the same purpose as a carbon tax, but would have a much more reliable effect on actual fossil fuel use.



Seasonal local produce at Cloughjordan Community Farm, one of Ireland’s leading examples of community-supported agriculture. Photo © Jess Schoening.

Such measures could be a strong trigger to move agriculture in a more sustainable, fair and diverse direction if their implementation was carefully managed, because they would gradually reduce fossil fuel use ‘at the tap’. Among other benefits, they would support the development of direct selling and community supported agriculture (CSA) schemes, and would require farming to become more labour-intensive — and as Helena Norberg-Hodge points out, labour intensive actually means job-rich.

However, if the imposition of these regulations was badly handled, without enough attention given to the financial effects of decreased productivity, those effects could potentially be catastrophic. We could see mass bankruptcies of smaller or more indebted

farms, a further concentration of land and wealth in the hands of a few, and perhaps even food shortages. Ways clearly need to be found to reduce these risks.

A Feasta paper due to be published in April 2022 will take a whole-economy approach, exploring some potential measures that we believe could help forestall these risks by making the overall economy less growth-dependent. Reorienting the economy away from growth as a goal, and towards well-being, would provide farmers — and all of us — with more flexibility for adapting to the green transition.

Caroline Whyte is an ecological economist, as well as a writer and editor for the [Foundation for the Economics of Sustainability](#) (Feasta).

The Common Agricultural Policy

The Common Agricultural Policy (CAP), in significant ways, defines what happens in farming throughout the EU. CAP emerged from an era when guarantees of food supply were needed. More recently, the idea of wider societal benefits — public goods — has been added. CAP comprises about one-third of the EU budget, and this is spent on both protecting farmers' income and on objectives such as environmental care, preserving landscapes and biodiversity.

The Environmental Pillar's submission on Ireland's most recent CAP Strategic Plan (2023-2027) says the plan, "by continuing to support the business-as-usual model of livestock production will indeed result in further impacts to Ireland's environment because the restraints to stop the impacts are not in place."

The Pillar argues that systems of governance and accountability for enforcement of environmental laws are not evident, and that environmental measures are not targeted enough, and have too many exemptions, to have a positive impact.

CAP makes "no serious attempt to address greenhouse gas emissions" despite the fact that Article 92 of the CAP regulation provides that "Member States shall aim to make, through their CAP Strategic Plans, a greater overall contribution to the achievement of the specific environmental and climate-related ob-

jectives in comparison to the overall contribution made in the period 2014 to 2020".

One positive in Ireland's latest CAP Strategic Plan is the co-operation projects, which are new, landscape-level environmental interventions. This measure will pay reasonably well for habitat protection and restoration. This is important because a just transition is not just about climate but also about ecological restoration, in a way that integrates local people.

Other positive measures include: the extension of some CAP protections to include previously ineligible features (which may help reduce springtime burning of scrub); the application of other nature protections (conditionality) to all farms (and not just arable farms, as is allowable under EU rules), a small but real move towards the equalisation of basic payment rates to farmers, an increase in European Innovation Projects (EIPs); and potential funding of farm renewable energy initiatives.

Overall, however, this CAP plan does little to adjust the trajectory of agri-food. The plan does not reach the standards of either the EU Green Deal, or even of its own environmental impact assessment. The new eco-schemes at least further embed the idea of an ecological dimension to payments, but only time will tell if ambition will increase to the required level.

The Common Agricultural Policy



The new co-operation project areas in Ireland's CAP strategic plan will provide payments for farmers in more 'marginal' areas to work together towards environmental goals. Photo © Canva

The Environmental Pillar's submission says the plan offers "no defined emissions cuts". The submission continues (p4-5): "It is impossible to quantify what if any [the] effects will be of plan interventions to help Ireland achieve the 22-30% cut in emissions from agriculture signalled in the Climate Action Plan." It also highlights the lack of targeted action on farmland birds and pollinators. Overall, the Environmental Pillar [says that](#) "measures in the draft CAP Strategic Plan fall far short of what's needed to address the biodiversity and climate crisis."

Enhancing the value captured by farmers

Irish farmers capture only [18.1% of value added](#) in the economic food chain, which is lower than the EU average of approximately 25%. Although this figure has its statistical limitations and doesn't account for exports, it indicates the disparate distribution of value added in the Irish agri-food sector, [which is mainly captured by the food and drink manufacturers](#) (p8).

One conclusion (p39) of the [2021 Feeding Ourselves workshop](#) was that, “value chain analysis is required on key Irish agricultural products to examine not only the share of economic value that goes to each of the actors, but also where environmental, health and social values are created and lost.” This information, “properly analysed and shared publicly in a digestible way, could reveal a lot about who is really benefiting from our agri-food model”. Matteo Metta, CAP policy analyst at ARC2020, [says that farmers need more policy support](#) so that they are prioritised in the value chain, and to help farmers who are “trapped in this unfair value distribution and struggling to move away from commodity-driven agriculture.” (p5)

Question: What supports are needed for farmers and rural communities to achieve a just transition — financially, and in terms of skills, knowledge and resources?

Consumer interventions in the supply chain

Policy interventions on the consumer's behalf may also aid a just transition for farmers. [TASC argues](#) (p33) that consumers are often time or cash-poor, and therefore find shopping at “edge-of-town superstores” a necessity. This system “does not enhance well-being and is neither environmentally nor socially sustainable. Ultimately, this system requires agricultural intensification to sustain itself and this creates a hostile environment for the traditional family farm and increases livestock GHG emissions.” TASC says (p37) that, “policies like the four-day work week and the implementation of a living wage would go some way to-

wards enabling people to shop locally or afford a fairer price for produce than those offered in supermarkets.”

Recently, the issue of high cost of living in Ireland has come to the fore, with people [forced to choose](#) between heating their homes or buying food. Yet at the same time low food prices at large supermarkets are undercutting farmers, [sparking protests](#).

The proportion of the weekly household spend dedicated to [food fell from 27.7% to 14.7% between 1980 and 2016](#). And yet, the overall cost of living — including transport, childcare, rent/housing — in Ireland is high, and rising. In this context, the price of food is being asked to do some very heavy lifting.

In 2021, Minister for Agriculture Charlie McConalogue launched a public consultation on the establishment of a National Food Ombudsman/Regulator, which would monitor below cost selling. Given the gravity of the situation, [with vanishingly few food producers left in some important sectors](#), it has taken a considerable time for the Office for Fairness and Transparency in the Agri-Food Supply Chain to finally be announced, on [22 March 2022](#). Its functioning may be key to establishing a better position for farmers in the value chain.

The Netherlands: too late for a just transition?

Question: How else can consumers be supported to make better decisions about buying food that supports farmers, local communities, and good agro-ecological practices?

How do we balance a high cost of living with affordable food in a just transition?

The Netherlands: too late for a just transition?

As it stands, the conversation on emission reductions often circles back to herd reduction, which is a sensitive topic. The Netherlands, which like Ireland is a major food exporter, is now acknowledging its inability to manage pollution from the manure of densely populated farm animals.

One Dutch MP is quoted as saying “[we can’t be the tiny country that feeds the world if we shit ourselves](#)”. The Netherlands has implemented a 13-year, [€25bn plan](#) which includes paying some Dutch livestock farmers to voluntarily relocate or leave the industry. For others, the fund will help transition to less intensive farming methods. One Dutch farmer told the Guardian that “many farmers wanted to change, but

were locked into intensive systems with a lot of animals and debts to pay”, suggesting that the government instead “spend money on helping all farmers transition, rather than for just a few to quit.”

Although Ireland has similar challenges with pollution, it is not yet taking similar action. [Teagasc’s road map for dairy](#) indicates that Ireland plans to increase its dairy herd by almost 200,000 by 2027, despite 47% of rivers having unsatisfactory nitrate concentrations, which “mainly comes from agriculture through chemical and organic (manures and urine from livestock) fertilisers and from urban waste water discharges,” [according to the EPA](#). The [nitrates derogation](#), which allows some farmers to farm at higher stocking rates, also continues to push our ecological limits. Earlier this year, An Taisce called for Ireland not to seek another derogation, with the group’s natural environment office [Dr. Elaine McGoff stating](#): “Derogations should only be allowed where they won’t undermine water quality. You only have to look at the overall state of our rivers, lakes and estuaries to know that they’re already in serious trouble, without adding more fuel to the fire.” However, the government ultimately requested, and [received, the derogation](#) for another four years.



Cows on Crawford’s organic farm, Cloughjordan. New policies may be needed to make it easier for consumers to buy food that supports farmers, local communities, and good agro-ecological practices. Photo © Oliver Moore

Conclusion: herd sizes, farm incomes & the balance between short term and long term aims

Neither Ireland's Climate Action Plan nor the government's '[Ag Climatise: A Roadmap towards Climate Neutrality](#)' plan suggest herd reduction to reduce GHG emissions and water pollution. Yet there has been concern about the potential effect that emissions targets could have on herd sizes and thus farmers' livelihoods. A [2021 report authored](#) by KPMG, commissioned by the Irish Farmers Journal, estimated that with a 21% reduction in GHG emissions, the profit of an average dairy farm would fall by €4,300, and an average beef farm by €1,200 (profits on poultry and pig farms remain roughly the same).

KPMG assumes in its analysis that "subsidies and income from other sources for the farm stay constant with the livestock reduction." Yet Professor Alan Matthews of Trinity College Dublin [has argued](#) that this assumption does not factor in knock-on ef-

fects such as higher prices resulting from increased demand for fewer products, along with new income streams created by diversification. He also wrote that the KPMG report highlights the costs of action, but not the cost of inaction. "Ireland already fails to meet its EU climate targets and will continue to do so if agricultural emissions are not reduced. This will require considerable tax expenditure on an annual basis to purchase allowances from other EU countries to bring ourselves into compliance, funding that could be used to promote the green transition at home."

Nevertheless, [there is serious concern among the farming community](#) that climate action will equate to job losses and reduced income. The war in Ukraine has compounded already rising fertiliser and feed prices, which may impact on [cattle](#) and on [sheep sales](#), and thus numbers and overall (absolute) emissions.



The war in Ukraine has compounded rising fertiliser prices. Fertiliser (FIBC bags) photo by Cjp24, CC BY-SA 3.0 via Wikimedia Commons

Conclusion

Much is now, at least potentially, up for discussion and perhaps even change. With prices for these inputs skyrocketing, and also being implicated in war and subject to sanctions, the case for trying to manage reductions to some categories of animal numbers is clearer than before. And yet, the immediate situation is one of numbers being in place that require feed and fertiliser to survive in 2022.

The case for EU Green Deal Farm to Fork targets — reduced mineral fertiliser use, increased organic farming proportions, for example — is stronger than ever, but the immediate needs are maintenance of a functioning agri-food system. “Reducing the reliance on mineral fertiliser produced with fossil fuel, is an especially important objective” [as the European Commission’s Food Security Communication](#), released late March 2022 in the context of Ukraine, states (p9). It also emphasises further research into “sustainable food production systems, including mixed-farming, agro-ecology or organic”: and yet, it [postpones immediate action](#) that would make these more the norm, such as limits on pesticides and support for nature restoration.

The war on Ukraine means that options which were previously difficult to consider are now on the table. This includes a [return to milk quotas](#) and [farmers being paid to cull cows](#), as well as a possible [cap-and-trade](#) methane reduction initiative, which was among 17 proposals by the recently formed Dairy Vision Group. Concurrently, there have been calls for this group [to be disbanded](#) and for green (farm) diesel to be [ring-fenced](#).

Meanwhile, the EU is considering [intervention](#) in the pigmeat and poultry sectors — including private freezer storage — due to rising input costs, and the Irish pigmeat sector may require [yet more support](#) to survive (there was already emergency support for the sector delivered at the [end of February](#)).

And yet, the EU Green Deal targets, [while delayed, are still to be implemented](#). A polluters permit system [may be expanded](#) from industrial pig units out into larger livestock farms too, though there is [political wrangling](#) over the size of farm to be impacted. Change, it seems, however difficult, is coming.

The case for these changes is stronger than ever now, as they reduce our dependency on fertilisers, feeds and other inputs, whatever about short term emergencies. As the Commission’s Food Security Communication [emphasises \(p8\)](#): “Without a transition set out in the Farm to Fork and Biodiversity Strategies, food security will be severely at risk in the long-term, with irreversible impacts globally”.

Perhaps some of these worries are short term. Or perhaps they point to real vulnerabilities in a complex system, with multiple risky dependencies, which also has climate and biodiversity targets that are being comprehensively missed. The ship is still heading for the iceberg. Whatever the case, working out a just transition in this fraught context will not be easy, but it will be necessary.

Below, to conclude this section, we offer perspectives on a just transition from a range of stakeholders.



Intensive farms must pull their weight for a just transition

Intensive farms must pull their weight for a just transition

By Fintan Kelly, Irish Environmental Network

In Ireland, agriculture accounts for 32.6% of total greenhouse gas (GHG) emissions, 90% of methane emissions and 88% of nitrous oxide emissions. Eighty five per cent of Ireland’s agricultural GHG emissions are associated directly or indirectly with bovine agriculture, with changes in agricultural emissions over and above those delivered by mitigation measures being driven by changes in cattle numbers. Given the high percentage of national emissions emanating from agriculture, and the strong link between the number of bovines nationally and total GHG emissions, the Climate Change Advisory Council (CCAC) advises that an absolute reduction in the number of cattle will be needed in addition to proposed efficiency measures.

Under the carbon budget scenarios, where agricultural emissions are required to reduce by 30% or more, suckler cow inventories decline from just above one million in 2018 to circa 200,000 by 2030. There is a larger spread in the magnitude of the reduction required in dairy cow numbers. To achieve a 51% reduction in agricultural GHG emissions (to be approximately pro rata with the total emissions reduction required by 2030) requires that dairy cow numbers are reduced to circa 650,000 by 2030, compared to just over 1.4m in 2018.

	Change in Agricultural Emissions vs 2018 (with all MACC/Ag Climatise Measures implemented)
Scenario A: Business as Usual (BAU)	-17%
Scenario C	-20%
Scenario D	-33%
Scenario E	-40%
Scenario F	-55%

Agricultural GHG emissions reduction scenarios analysed using the Teagasc FAPRI-Ireland Model

Intensive farms must pull their weight for a just transition

Figure A: Dairy Cows

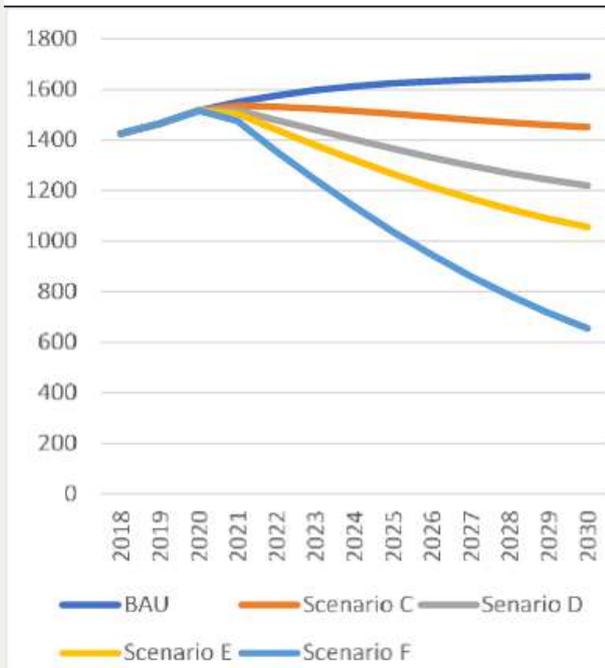
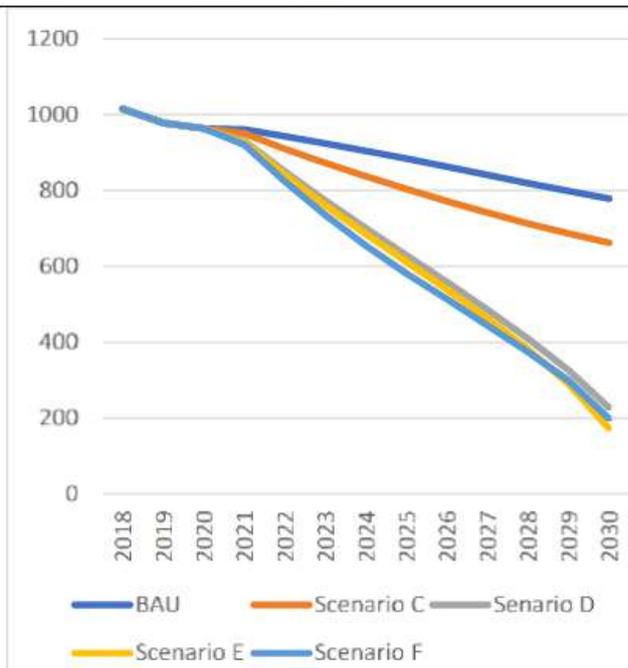


Figure B: Other (Suckler) Cows



Teagasc FAPRI – Ireland modelling of projected animal numbers under different emissions scenarios. (Source: Teagasc 2021)

According to the CCAC: “The legislation requires that the carbon budgets take into account, insofar as is practicable, the need to maximise employment, the attractiveness of the State for investment and the long-term competitiveness of the economy.”

The focus on economic output and job creation has biased the scenarios in favour of dairy production, placing a disproportionate burden on suckler farmers when it comes to destocking. The CACC has interpreted the need to maximise employment and State investment at an aggregated national level. This bias in favour of overly simplistic economic indicators fundamentally undermines the scenarios, which fail to consider the need to ensure equity in opportunities and burden sharing at a regional level.

Intensive dairy production is concentrated in the regions of the country with the most productive land, with the dairy processing sector mirroring the distribution of the dairy sector. The CCAC has identified that emissions from the dairy sector will also need to be offset within the land use sector, primarily through the management of high carbon soils and afforestation

of marginal land. In effect, while the economic opportunities presented by the dairy sector are concentrated in the wealthiest parts of the country, the burden of offsetting the resulting GHG emissions fall to farmers who are the least economically productive and who have been historically marginalised by a range of factors such as the physical constraints on farming or socio-economic isolation. This raises serious questions in regard to the absence of a just transition within the framework of Irish climate action.

We believe that the scenarios produced by the CCAC and Teagasc do not reflect the complex multifaceted legal or policy framework that underpins our modern democracy, and our aspirations for a fair and sustainable rural economy. It is our view that a just transition requires policies that ensure that there is equity and equality in the responsibility and opportunities presented by the agri-food sector and climate action.

The scale of the changes proposed by the targets set for reduction in the suckler herd, afforestation, and the rewetting of peat soils, will have wide ranging implications for the socio-economic and environmental

Intensive farms must pull their weight for a just transition

well-being of affected communities. The CCAC has given some recognition to these concerns. But they raise the need for government policy to mitigate negative impacts rather than ensuring that positive socio-economic and environmental outcomes across all regions are prioritised in tailored scenarios.

We would like to see scenarios that maximise the environmental benefits of sustainable farming practices, and environmentally beneficial land use and habitat management. Reducing agricultural emissions by destocking farms where environmental indicators such as water quality, air pollution and soil type indicate that the intensity of farming has exceeded the environment's carrying capacity would deliver additional benefits for the environment and communities.

We would like to see scenarios that recognise the multitude of environmental and cultural goods and services such as carbon sequestration, flood attenuation, biodiversity and recreational space that are supported by some farmers. We need to give greater recognition and support to farmers who provide the greatest public goods and services to society, ensuring a just and a sustainable transition for farming in response to our climate and biodiversity crises.

Fintan Kelly is the agriculture and land use policy and advocacy officer at the Irish Environmental Network.

A just transition to energy efficiency for low income households

By Dr. Olive McCarthy, Centre for Co-operative Studies, University College Cork

In February 2022, the Irish government launched the National Retrofitting Scheme, widening the range of supports available to households to improve their energy efficiency. For homeowners, there are three main dimensions to the scheme: individual energy upgrade grants offering up to 80% grant support for insulation and heating, deep retrofit grants offering up to 50% of the cost, and free energy upgrades for those at risk of energy poverty. A state-run low cost loan scheme is also being developed.

[Recent research](#) conducted by the UCC Centre for Co-operative Studies and North Dublin Money Advice and Budgeting Service (MABS), funded by the Irish Research Council, shows that these measures will not be enough to support households on low incomes in a just transition to greater energy efficiency, and to cut the cost of household energy.

[According to the Nevin Institute](#), a just transition requires social interventions to prevent poorer households from bearing the burden of the transition to a low-carbon economy. In Ireland, energy poverty arises due to inadequate household resources to cover living costs. Low income households are among those most vulnerable to energy poverty.

According to [TASC](#), carbon taxes, based on the consumption of carbon-emitting fuels such as coal, peat, oil and gas, have a direct negative impact on those living in energy poverty and in inefficient housing. Irish carbon taxes will continue to increase annually by €7.50 per tonne until 2030. These carbon taxes, together with recent substantial energy price hikes, will hit those experiencing energy poverty the hardest.

Among low income households, a lack of access to finance is considered a key barrier to investing in energy efficiency measures, which in turn, prevents a reduction in energy bills which could serve to in-

crease disposable income. Grant assistance and tailored loans are used as policy tools to support low income households to engage in energy upgrades.

The research, conducted shortly before the National Retrofitting Scheme was launched, gathered the views of 128 households experiencing low disposable income who are active clients of North Dublin MABS. Not surprisingly, inadequate disposable income emerged strongly as a barrier to engagement with retrofitting schemes for these households. Just under two thirds of participants qualified for free upgrades but a mere 8% had availed of the supports, mostly in the form of lagging jackets, low energy light bulbs and attic insulation. Over a third of those surveyed did not qualify for free upgrades and were already financially squeezed, with no scope to engage in upgrades.

These households were either unable or unwilling to access credit to upgrade their homes. Thirty five per cent of households were aware of the availability of retrofit grants. Almost 90% said that the cost of the work was a factor in the household decision to engage in energy upgrades while half of all households were unlikely or very unlikely to invest in any kind of retrofitting.

Promisingly, almost all households had changed aspects of household energy consumption behaviour, such as turning off the heating, turning off lights, taking shorter showers and switching off unused devices, showing a strong awareness of strategies to reduce energy consumption and a willingness to engage.

The findings strongly suggest that financial incentives alone, or indeed, free retrofitting, will not be enough. The recent widening of supports does little to address this. While the provision of financial supports is fundamentally important, a wider range of tailored measures will be necessary to reach and

A just transition to energy efficiency for low income households

support low disposable income households in the transition to energy upgrades. One-on-one advice will be critical to provide more information on how to save energy, and on the benefits that can accrue to households from doing so. The introduction of Community Energy Advisors, as recommended by the Saint Vincent de Paul in its submission to the Climate Action Plan 2021, will greatly help in reaching households that are least able to avail of existing schemes. Consideration of how to support those living in rental accommodation will also be crucial.

Dr. Olive McCarthy is a senior lecturer with the Department of Food Business and Development, and director of the Centre for Co-operative Studies, both at University College Cork.

The efficiency of grass-based Irish farms must be recognised

By the Irish Creamery Milk Suppliers Association

A just transition is generally taken to mean that no person, community, or sector of society should be left behind in Ireland's transition to a carbon neutral society. The [Irish Creamery Milk Suppliers Association](#) (ICMSA) has serious concerns in relation to the implementation of the 'just transition' which clearly has not worked to date, with the Midlands being a good example, with the ending of peat harvesting by Bord na Móna.

The reality is that communities in the Midlands have been left behind with no alternative sources of employment put in place. In relation to agriculture, it has to be recognised the key role played by farming in terms of food production, with the Ukrainian crisis bringing this fact into sharp focus. Irish farmers are food producers, amongst the most sustainable in the world, and climate policy will simply have to recognise the unique position of food producers in this regard.

ICMSA believes that the just transition should focus on incentivising the sector to improve its carbon efficiency through such measures of the Teagasc Marginal Abatement Cost Curve (MACC), and due recognition must be given to the issue of carbon leakage, which continues to be ignored by policymakers but is a very real reality in terms of climate change.

Diversification

There are approximately 130,000 farms in Ireland, the majority of which are family-based units. Since the McSharry reforms in 1992, the issue of diversification has been promoted and debated. The reality is that while niche diversification options have been successful for a small number of farmers, there are no diversification options that will deliver an income to a large number of farmers comparable with incomes in

other sectors of the economy, and comparable with current farm production systems in Ireland.

With the removal of CAP incentives, farmers responded to world market prices by becoming efficient in their chosen enterprise, this meant specialisation and economies of scale. Ireland has sensibly specialised in ruminant production due to our advantage in grass-based systems. If Ireland's agriculture is to diversify, resources must be deployed to ensure viability of farming production in Ireland. Central to this would be a retail price that would reflect the cost of production. Current policies on diversification are doomed to fail, for example, organic farming is currently being supported strongly but the reality is that there is not a market for organics that will consistently return a sustainable price to the farmer. In fact, the current policy could do enormous damage to existing organic farmers and the returns they receive from the marketplace.

Diversification options that will deliver a viable income from farming are extremely limited. There is no farming sector that can generate the same return as dairy farming. Land type and climate dictates that grass based systems are the most efficient economic and environmental farming models in Ireland and this needs to be recognised.

The Irish Creamery Milk Suppliers Association is a national independent group established to tackle reducing milk prices. It represents creamery milk suppliers at local, county, national and European levels.

Time for new policies on food and land use

By the Irish Natura and Hill Farmers Association

Introduction

When assessing proposals around a just transition with regard to climate change and biodiversity loss it is vital that this is balanced with the need to ensure there is a sufficient food supply.

How we got here

On the establishment of the Common Market (which was the forerunner to the EEC and later the EU) food security was a major factor. On this basis, farmers were supported through the Common Agricultural Policy (CAP) to produce food. However, as time passed the emphasis of this focus changed initially to producing cheap food and from the mid-1990s on we saw an increasing emphasis on protecting our environment.

Cheap food policy

With regard to the cheap food policy which has been pursued from the mid-1970s, the thinking and indeed policy was the production of cheap food which helps create more disposable income for the general population. This disposable income could then be spent on non-essential items which helped generate further employment, especially in manufacturing and service industries. All of this helped drive tax revenue for national governments, which is spent on the delivery of essential services such as healthcare and social protection.

Balancing food production with the challenge of climate change and biodiversity loss

In understanding the fundamentals of a cheap food policy, we must recognise that we are now at a crossroads. While many have pointed to the need to address climate change and biodiversity loss as key priorities, we must recognise that there is a cost to delivering on these. This cost must be properly assessed, and just as important we must establish how we pay for it.

While most people accept the fact that there is a cost to addressing climate change and biodiversity loss, what most don't want to accept is that they will have to pay for it. Unfortunately, public representatives in Ireland and across Europe have failed in their responsibilities to explain to their people that they will have to do with less – much easier to blame someone else.

Over the last number of years, many have pointed to the role of agriculture in our overall emissions. However, the crisis in Ukraine has brought home to everyone the importance of food production. What it has also revealed is that the cheap food policy that much of our economic activity is built on is no longer fit for purpose.

This policy has driven specialisation over diversification because the returns are too low. It has left us vulnerable in key areas, especially around grain production. It has left us dependent on imported fertiliser and animal feedstuff, and for farmers it has taken a heavy toll in terms of farm accidents and deaths. It is time to change and this change will involve a significant increase in the price of food and a new land-use policy.

Just transition

A higher food price will encourage more people to consider farming as a viable option while also providing them with the opportunity to diversify and ensure adequate resources to protect the environment. This can also help deliver on food security across Ireland and the EU, and reduce the dependency on imported feedstuffs by creating markets at home.

In relation to biodiversity and land use, we need to reassess current policy. With 13% of Ireland designated as part of the Natura 2000 network, farmers have been restricted from carrying out basic farming activity while being blamed for the regression in some of these habitats. By active engagement and support, these lands can continue to produce quality foods while also delivering on habitat requirements.

The new CAP, while ambitious in some areas relating to the green agenda, is not prioritising the Natura network, which is a major weakness. In addition to this, we need to ensure that policy concerning CAP doesn't see more land taken out of food production because we believe that climate change and biodiversity concerns can be addressed while also delivering on the production of food.

The Irish Natura and Hill Farmers Association was established in 2015 to represent farmers on hill, designated and environmentally valuable land.



Diversification

Introduction

The 'Diversify Diversification' event taking place at Cloughjordan Ecovillage in April 2022 has two main objectives. The first is to unpack what is possible and desirable for on and off farm diversification in Ireland, and how climate-smart diversification may affect farm incomes and rural communities. The second is to bring together farmers, environmentalists, policy experts and rural activists to encourage co-learning and mutual understanding.



Cloughjordan Community Farm. Photo © Eoin Campbell (Sustainable Projects Ireland).

Introduction

Context

Overall, the Irish agri-food sector is specialising more, and diversifying less. Being dominated by live-stock, it is also quite dependent on fertiliser and feed imports. Even before the outbreak of war in Ukraine, Ireland's increasingly specialised agricultural system had been [facing](#) increasing food, fuel, fertiliser, and feed costs. With the Covid-19 global pandemic, war in Ukraine, and climate and biodiversity breakdown, the case for a less exposed agri-food system — one that is less environmentally costly and less input heavy, as proposed by [Farm to Fork](#) and other [EU Green Deal strategies](#) — is clearer than ever.

Agri-food expansion, particularly since the end of the milk quota in 2015, has left some areas of Irish farming particularly exposed to feed and fertiliser price hikes. What's more, the war in Ukraine has led to [sudden clawbacks](#) on even the most rudimentary environmental progress on farming and food, including fallow land rules and Farm to Fork targets on pesticides and nature restoration. [Emergency monies](#) have been found around Europe, including in Ireland, for [new tillage schemes](#) to avoid the risk of fodder and food shortages in a highly exposed system. The aim in Ireland is to increase the cropped area [by 25,000 hectares](#).

This task is all the more enormous as there has been a serious decline in the crop area in Ireland in recent years, as [CSO figures show](#). In 2020 the CSO said: "Overall production of the three main cereals (wheat, oats and barley) decreased from 2,396,000 tonnes in 2019 to 2,013,000 tonnes in 2020 (-16%). This was due to a combined drop in the production of all three main winter cereals (-47.7%), despite a combined rise in the production of all three main spring cereals."

Figures released in [March 2022](#) show a continuation of these trends. Overall cattle numbers were up 44,300, with dairy cow numbers making up 36,800 of this — up 2.4% to 1.604,500, while other cows were down 4.4%. Older cattle numbers were down, while spring crops (wheat, oats, barley) were all down significantly.



Overall production of wheat and other cereal crops in Ireland has decreased rapidly in recent years. Photo © Canva

This follows on from rapid loss between 2014 and 2018 of our self-sufficiency in feed grain, from 41% to 21%, because of imports. Presciently, the Teagasc report [Crops 2030](#) warned that, "in the context of Origin Green, this deficit highlights a significant vulnerability concerning authenticity of Irish food exports when such a large proportion of our animal feed is reliant on imports".

The government's new tillage scheme, at €400 per hectare, may reverse some of the loss in crop area. But there is concern that it may also encourage vegetable growers to move into tillage, replacing a critical-yet-beleaguered sector with tillage that is primarily geared towards producing animal feed.

Diversification is not a cure-all for Ireland in terms of tackling the challenges of climate, biodiversity, and food security. But if done well, it could serve as a positive step forward. It can also be seen as a 'hedged bet' on uncertain futures; potentially more appropriate for mixed, agroecological approaches to farming and rural resilience, and if done with an ecological mindset, potentially more in keeping with planetary boundaries and other societal needs as we face into a changing, crisis-defined world.

As Fergal Anderson of Talamh Beo [observed](#), "...we have to ask ourselves what kind of agricultural sector do we want to have in five to 10 years' time? What does the Irish citizen want to see? More environmental damage, more concentration, more specialisation? Or vibrant local economies, that provide decent livelihoods to farmers and nutritious food to citizens."

What is diversification?

“Agriculture is at the forefront of the fight” against climate breakdown while farmers are “directly exposed to the impacts of extreme weather events, rising input costs and workloads, and related stresses on animal health and welfare”. That’s according to the [‘Towards A New Agricultural and Food Policy for Ireland’](#) paper published by three Irish environmental coalitions last year. The document called on the Irish government to, “develop a farmer and community-centred Just Transition action plan for the sector that includes diversification options with environmental co-benefits. For farmers who would like to diversify their practices, outputs, or off-farm activities, the opportunity to do so should be as straightforward and accessible as possible.”

The potential of diversification to reduce GHG emissions was left unexplored in Ireland’s [Climate Action Plan 2021](#). The plan outlines measures that will help reduce GHG emissions in agriculture, yet the contribution of “diversification opportunities” and “carbon farming” are marked as ‘TBD’ (to be determined). This shows that state policy still has a long way to go in understanding and harnessing the value of diversification.

But the Climate Action Plan does say that the government will “incentivise increased organic farming and diversification” (p52) and that it will “invest in areas that will contribute to alleviating the impact of the transition, by financing the diversification and modernisation of the local economy.”

Diversification is not a panacea, but its potential is still up for grabs. Ireland now has a blank slate for imagining forms of diversification that can improve rural life and farm livelihoods, and deliver public goods like carbon sequestration, biodiversity and thriving rural communities, alongside food production.

According to CAP Analyst Matteo Metta of ARC2020, diversification in agriculture can be seen at three interconnected levels:

- Level 1: Diversifying farming systems includes: incorporating multiple breeds of livestock; mixed farming systems integrating crops and animals; organic food production; advanced systems of rotating multiple crops; trees including agroforestry; and riparian buffers at plot, farm, landscape or higher levels. Diversified farming systems (DFS) are needed to adapt to agro-ecological cycles (such as pest pressure and fertility), to mitigate climate breakdown, and provide for nutritious and balanced diets.
- Level 2: Diversifying farm business and income relates to capturing higher value from agriculture and assets at the farm level, but also carrying out other non-gainful activities beyond farm work such as community events, open days etc. Some examples of on-farm diversification activities include food processing and direct selling, social farming, educational activities, renewable energy, agritourism, and payments for landscape management and public goods.
- Level 3: Off-farm diversification involves embedding family farm incomes into the wider regional economy and society through off-farm activities that are not related to farming, like teaching, consultancy, public administration, or construction.

What is diversification?

QUESTIONS: Do diversified farming systems create the conditions for farm income diversification, by providing a wider array of produce for food processing, or even for agritourism? Do they bring new challenges, like the need for training and new equipment? Do they bring more costs and risks? Can they achieve economies of scale while preserving small-scale farmers' autonomy?

Similarly, when is off-farm income diversification beneficial to the family farm and rural communities, and when does it become the extended arm of a labour-replacing, capital driven farming system?

To “diversify diversification” means to think in the widest sense possible about how diversification works for rural areas, not just farms. So while more agro-ecological approaches to regional resilience can uplift rural areas — with extra employment, processing etc — diversification can also be an action that benefits rural areas more widely, as regards bringing in a new, wider range of employment and activities in a region.



Outdoor meal at Cloughjordan Community Farm. Farming has the potential to bring communities together for a celebration of local food, such as through community events and open days. Photo © Davie Phillip.

What is diversification?



Freshly pressed apple juice at Cloughjordan Apple Festival. Photo © Eoin Campbell (Sustainable Projects Ireland)



On farm processing, like the production of dried apple seen here, can enable farmers to capture more of the food value chain. Photo © Oliver Moore

Diversification is not just adding sheep to a beef cattle herd, or even just growing fodder crops for your own animals. It is also about adding value at the farm level, about farm-to-rural relationships, and also about rural practices themselves: rural areas can be more vibrant when farms have mixed, diverse activities happening on them.

More ideas for diversification will no doubt emerge from the new synergies that develop in revitalised rural communities, with mixed use co-working spaces and food hubs, for example. The potential of the WeCreate workspace in Cloughjordan, with its digital farmers' market, fabrication lab, co-working spaces, and national and European projects based there, all on a 67-acre ecovillage and community owned farm, is a case in point.

What is diversification?



The WeCreate Community Enterprise Centre in Cloughjordan Ecovillage. Photo © Davie Philip

[WeCreate Community Enterprise Centre](#) (North Tipperary Green Enterprise Park) was established in 2014 in Cloughjordan Ecovillage. The centre is committed to the realisation of ecological sustainability and community resilience through the development of resilient, low-carbon and largely self-reliant local economies. The centre is a 'living lab' demonstrating appropriate digitalisation approaches, and operates as an 'ecosystem of innovation', enabling co-operation and collaboration between the different users of the centre. The centre includes:

- Co-working: low-cost shared office space and office units with high speed broadband.
- Digital studio: facilitating on-line virtual training and blended (on-site and virtual participation) workshops and events.
- FabLab: a digital fabrication laboratory providing laser cutting, CNC milling, routers and 3D printing services.
- Food hub: providing sustainable routes to market for small producers through the North Tipperary On-line Farmers Market using the [Open Food Network](#) user owned digital platform. The food hub also provides digital training and mentoring to farmers, producers, co-ops and other food hubs across Ireland.

Diversification: the story so far

Linking a just transition and rural diversification

This report posits that agricultural and rural diversification will play an important part in Ireland meeting its legally binding GHG reduction targets, to address its biodiversity crisis, and to reinvigorate its rural communities. To reduce our emissions, it will be necessary to change some aspects of our lives and livelihoods. When making these changes, it is essential that no individuals, communities, or sectors are left behind.

Dr. David Styles, professor of agri-sustainability at NUI Galway, [says that](#) the diversification of the bio-economy is a key “ingredient” of climate neutrality. Just transition resources should focus on supporting farmers to diversify in ways that are economically, socially, and environmentally beneficial, helping them to incorporate farming methods with lower GHG emissions.

Diversification: the story so far

For the past several decades of Irish farming, there has been a drive towards monoculture and specialisation. This has enabled farmers to use specific machinery, thereby increasing efficiency for activities such as planting and harvesting. Specialisation and mechanisation have had advantages for Irish farms, and for farms globally. Farmers have benefited from increased outputs and more efficient farming systems. Advances in machinery have enabled farmers to work more quickly, and made certain work less strenuous. The globalised agricultural system has enabled farmers to buy feed crops for less than it would have cost to grow them. Technology has offered ways to monitor soil health or other agri-environmental variables more accurately. Yet, their potential advantages and public accessibility are still to be fully integrated in policy making and farm choices.

But focusing on a single output has its drawbacks, including limited food security as well as increased risk of disease and pest outbreaks, in both animal and plant agriculture. Moreover, monocultural systems cause soil exhaustion as [“growing the same crop year after year reduces the availability of certain nutrients and degrades the soil”](#). Farmers are

required to use expensive fertilisers to counter this, which comes with a big [environmental](#) and [financial](#) cost, worsened by the war in Ukraine.



Fertiliser factory. Irish farmers have become increasingly reliant on imported fertilisers, which come with a big environmental and financial cost. © Sharon Loxton and licensed for reuse under this Creative Commons Licence. (CC BY-SA 2.0)

Fergal Anderson of Talamh Beo, in a [report](#) published by the Green European Foundation, argues (p1) that “the production of crops where it is cheapest to do so (in terms of labour, weather, soils, etc.) has created monocultures rather than polycultures of both crops and farm types, and has forced diversified, small scale local producers to compete with agri-business companies on global markets for the chance to feed their communities.”

Specialised, globalised food production also means that “our current food production and distribution systems are rigid, fragile and vulnerable to shocks,” according to Anderson. As climate change drives more severe and frequent weather events, our food imports will become more vulnerable, which underlines the need for a thriving, indigenous, diverse agri-food sector. [Research](#) from Bord Bia states that two-thirds of Irish shoppers believe it is important to buy local food, showing that there is a market in Ireland for more diverse, locally-produced food.

Diversifying at level 1 (farming systems)

A society, and its physical infrastructure, that is adapted to complex and varied farming systems is becoming more of a necessity to protect Irish agri-biodiversity, farmers' livelihoods, and healthy diets. There are many dimensions to developing complex and varied farming systems, including restaurants, schools, logistics, and food habits vis-à-vis knowledge and skills to grow, process, and eat more ecological, seasonal produce.

The Climate Action Plan says that extreme weather events will become more frequent and harmful to our food production systems. For farmers, the question of how to manage climate-related risk is often seen as a choice among alternative strategies, like crop diversification, community supported agriculture or private insurance schemes. But because each strategy has its own requirements and uncertainties, not all farmers have access to and can choose among them.



Jorge and Noelia, ESC volunteers at Cloughjordan Community Farm. Community-supported agriculture is one diversification strategy that could help to make farms more climate-resilient. Photo © Eoin Campbell (Sustainable Projects Ireland)

Diversifying at level 1

EU Sustainable Development Goal number two, ‘zero hunger’, [includes a sub-aim](#) “to ensure sustainable food production systems and implement resilient agricultural practices that... strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters, and that progressively improve land and soil quality.” Diversified farming systems may provide farmers with a more secure income, without all of their eggs in one basket.

In recent years diversification has been associated with [multi-species grass swards](#), which is a good start, but only the tip of the iceberg when it comes to diversification potential. “So where to start? Focus on the good, and expand out from there”, suggests the [‘Feeding Ourselves’](#) report. Knowledge of agroecology, organic farming, and multispecies swards is already out there, so we can scale up these solutions.

Diversified farming systems can reduce soil exhaustion, reduce the need for imported and expensive inputs, reduce risks of crop failure, and improve biodiversity. But the [‘Towards...’](#) policy paper says that without economic incentives for diversification, there is a risk of causing more harm to farm incomes “as Ireland’s climate and environmental targets become increasingly onerous.” (p39)

Diversifying at level 1: organic

Dr. Oliver Moore of the Centre for Co-operative Studies at UCC, and the think-tank ARC2020, [says that](#) “organic can be described as a brilliant all-rounder in the delivery of public goods.” The Climate Action Plan commits Ireland to increasing its land area under organic production from 74,000 hectares to 350,000 hectares by 2030. As well as protecting [water quality](#), Irish organic dairy farms [perform better](#) than non-organic farms for biodiversity ([see also](#)). According to the [EU’s Farm to Fork Strategy](#), organic farming “has a positive impact on biodiversity, it creates jobs and attracts young farmers. Consumers recognise its value.”

“Ostensibly, Ireland is well-suited to organic dairy,” [suggests Moore](#). With our long outdoor grazing season, cattle require less time in sheds and less imported feed. [Teagasc states that](#) on a return per litre basis, some of the most profitable dairy farms in the country are organic.

[According to Moore](#), input costs on organic farms are lower and may be less volatile, and premiums are often achieved. Research suggests that organic farms can be more viable, and have 10-20% more employment per hectare, an easier entry point for women into farming, and a younger age base.

Organic farmers can tap into growing Irish and European markets, according to a [government review](#) of the sector (p10-12). “Consumer research shows that there is also a rising preference for organic food over conventional food in the Irish market. The research disclosed that over 91% of Irish consumers believe that organic products are generally better than non-organics – with poultry, meat, eggs, seafood, vegetables and fruit especially preferred,” the review says. (see [2022 figures here](#))

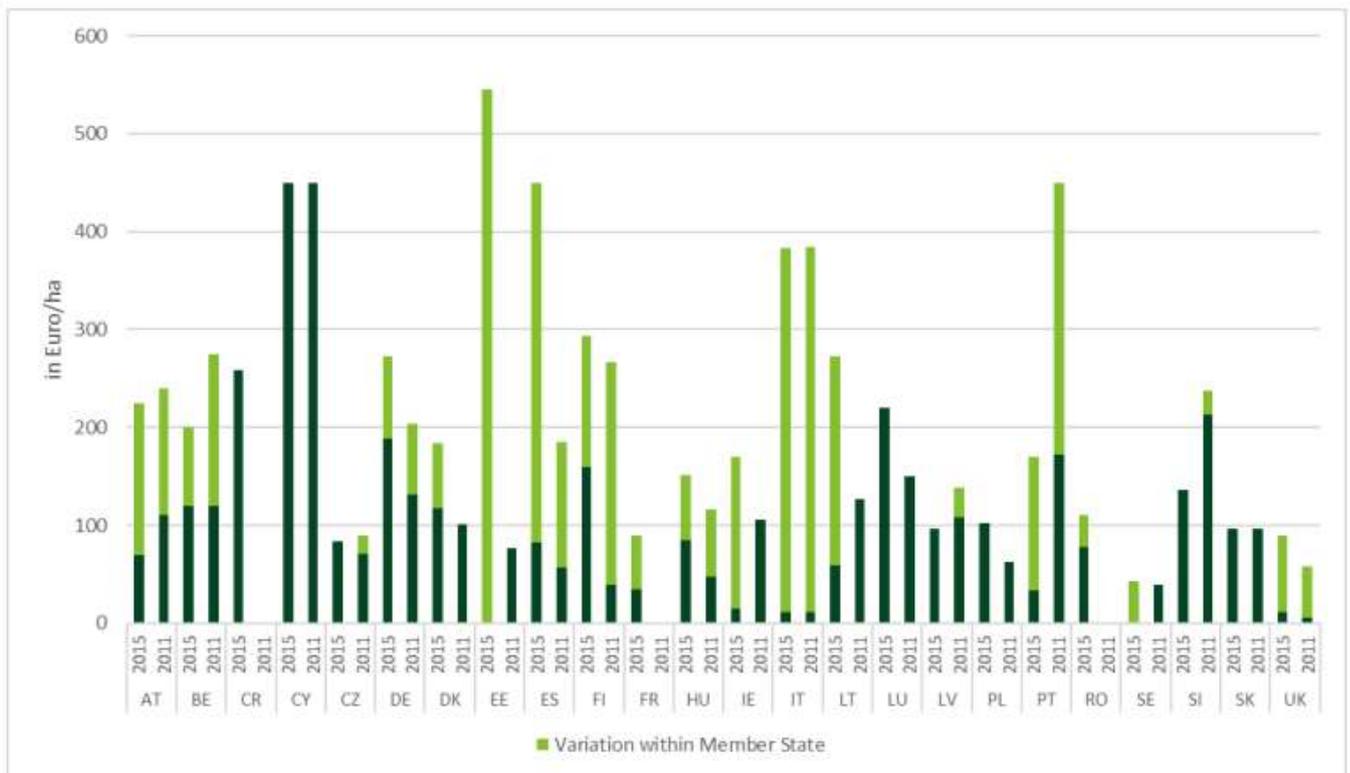
The EU’s [Farm to Fork Strategy](#) says that “the market for organic food is set to continue growing and organic farming needs to be further promoted.” But it also says that more support is needed, including CAP measures such as eco-schemes, advisory services and investment. The European Commission’s [action plan on organic farming](#) aims to have 25% of the EU’s agricultural land under organic production by 2030.

Yet in 2018 Ireland had just 1.6% of its land area under organic production, one of the [lowest figures in Europe](#). [According to Moore](#), “organic in terms of land area in Ireland, is a laggard. [Ireland has one of the lowest shares of organic farmland](#) in the whole of the EU.” To close the gap, Ireland has set a target to have 7.5% of usable land area under organic cultivation by 2030. This is ambitious, and progress is being made, with [third level education options finally emerging](#), and with higher payment rates for organic horticulture announced in Ireland’s draft CAP Strategic Plan. However, this same plan — yet to be final-

Diversifying at level 1

ised — will see most farmers (i.e. all livestock farmers outside dairy) staying at the same organic farming payment level that has been in place since 2015. And this will be the case out to 2027, unless changed in the coming, final weeks. This is well below the European average. This is despite higher feed costs and

higher conventional beef prices — and organic payments are supposed to be about income forgone and costs incurred. (See page 22 [here](#) for more on payment rates for organic grassland across the EU, and [here](#) for IFOAM Organics Europe on Ireland's failings in its draft CAP planning for 2023-2027).



A comparison of what EU countries paid for the maintenance of organic grassland in 2011 and 2015 shows Ireland far off the top of the table. Source: IFOAM Organics Europe

Breaking barriers to entry for organics

By Organic Growers Ireland

The [Organic Growers of Ireland](#) is an organisation that was set up by growers for growers. Its primary objective is to help new entrants to gain invaluable experience with established organic farms through its internship programme. Therefore, the OGI is acutely aware of the challenges facing those hoping to find their way in the organic farming world.

The most significant barriers for new entrants looking to establish organic holdings are the individuals' capacity to access land and capital. Access to land may not be relevant to those that come from farming backgrounds and are taking over the workings of a farm, or have land that they have inherited. However, for folks that do not have such connections, this challenge cannot be overstated enough; for as we know, without land, there is no farm.

Agricultural land parcels are generally sold at large acreages, putting the cost out of range for many new entrants. When small land parcels, from one to five acres, emerge on the market, they are often sold as developmental or residential sites. This again makes purchasing such a site a pipe dream. Whilst the leasing of land is a common practice amongst some farming systems, the infrastructure required to establish an organic horticultural holding makes leasing land for this farming system somewhat troublesome. Horticulture holdings incur significant start-up costs as infrastructure relating to polytunnels, packing sheds, and refrigerators are generally essential. Land available to lease most often does not come with these in tow, and it's a huge undertaking to invest in this infrastructure on a leased property knowing that it might have to be hauled off at some stage down the line.



Kevin Dudley watering at Cloughjordan Community Farm. Despite the expansion of education and training in organic horticulture, there remain significant barriers for those wishing to enter this industry. Photo © Eoin Campbell (Sustainable Projects Ireland)

Breaking barriers to entry for organics

Once land is acquired, barriers then arise in relation to establishing this vital infrastructure. A huge investment is required on the part of the new entrant to get their horticulture holding up and running. It's a scary venture when you are not fully certain how it is going to play out. Determining a market and establishing links before you have vegetables in the ground is all well and good, but sometimes connections are fickle until you have something to show for your talk. Whilst there is some support available from Local Enterprise, it restricts people who have been working full-time or part-time in the run up to getting their horticultural holding up and running.

If these matters of land and set-up costs are resolved, there is the understanding on the part of the new entrant that they have to be all things to this business: farmer, business manager, salesperson, social media and marketing expert and delivery driver. Given the expense of starting out, hiring someone to take on some of these tasks is out of the question, which leaves new entrants juggling all manner of tasks. There is a long-term commitment made when establishing a holding given the nature of the work. And given the high labour that is required, income is generally low versus the inputs from the farmer.

However, whilst these challenges are real and significant, there are opportunities available to new entrants. There is an increased consumer demand for locally sourced organic produce. Unfortunately, events tragically occurring on the world stage, like Brexit, the pandemic and the Ukraine crisis, highlight the fundamental need for resilient local food systems. Therefore, there are markets available for a skilled farmer to seize. Whilst skilled farmers are plenty in Ireland, opportunities to train beyond a Level 5 and Level 6 course were limited up until recently. This presented as a barrier to new entrants as their organic farming learning journey could only go so far.

Organic horticulture, and horticulture in general, are often in the shadow of Ireland's large beef and dairy industry, a matter well evidenced by only the recent introduction of a module on organic production in the main agricultural and horticultural colleges. However, with the expansion of organic training and education in Ireland, there will be an increase in knowledge and skills amongst new entrants. The OGI internship allows new entrants to gain invaluable experience, whilst the [new organic and biological agriculture courses](#) at WIT will allow people to upskill in this country instead of having to travel abroad. [NOTS](#) also offer fantastic learning opportunities to farmers at reduced costs whilst supporting networking between farmers themselves.

OGI is a representative body for Irish organic growers, dedicated to info sharing, education, lobbying and activism.

Diversifying at level 1: food security

We need urgently to diversify our farmed landscape to reduce our reliance on imports. Ukraine and Russia export a large proportion of the ‘four Fs’ to the EU: feeds, fuels, fertiliser, and food. “The crucial roles both Ukraine and Russia play in global agri-food and related trade are hard to underestimate,” according to ARC2020. Ukraine’s exports have been severely impacted, Ukrainian farmers have been lim-

ited in their ability to plant cereals this spring, and exports from Russia are severely restricted, creating global shortages. In the Dáil, Taoiseach Micheál Martin [expressed concern](#) about Ireland’s food and fuel supplies, as about 60% of Ireland’s grain is imported every year, and Russia supplies over 20% of the fertiliser used in Ireland.



A mineral fertiliser plant. The war in Ukraine, and increases in the cost of fertiliser, have left Ireland’s high-input agricultural system exposed. Photo © istock photo

In response to food security concerns, the National Fodder and Food Security Committee was established in March 2022. The chair of the group, Mike Magan, [said that it was](#) set up to “prepare an industry response and to develop contingency plans and advice to assist farmers in managing their farm enterprises through a period of high input price inflation and potential supply chain pressures.” So far, the focus of the group seems to have been on encouraging

farmers to plant more crops to replace animal feed, rather than food for human consumption.

We are at a crossroads in Ireland. We can ask farmers to undertake diversification that will produce food for people, reduce pressure on water quality and biodiversity, and reduce input costs. Or we can double down on a system that has been exposed as fragile at a crucial moment, while still making little

Diversifying at level 1: food security

headway on our overall climate targets. This fragile system relies on fertiliser and feed from abroad, as well as putting intense pressure on ecosystems and water quality. “This crisis – like the Covid-19 crisis, and others before – has shown the importance of at least some degree of resilience, self-sufficient agri-food systems,” [says Dr. Oliver Moore](#).

A [recent Irish Times column](#) by Ruth Hegarty, director of a consulting agency dedicated to food policy and advocacy, said that after years of emphasising specialisation, “Ireland now finds itself importing the majority of our fruit and vegetables...vast quantities of crops that can be grown in Ireland, including tens of thousands of tonnes of apples, potatoes, onions, cabbages and carrots.”



Ireland imports vast quantities of crops that can be grown here, including carrots, potatoes, onions and cabbages. Photo © Eoin Campbell (Sustainable Projects Ireland)

Hegarty writes that, “because we have been so focused on beef and dairy, and because we have been able to source animal feed cheaply from abroad, we have not worried so much about growing other things.” She adds that, “the price of fuel, fertiliser and animal feed was already on the rise before Russia’s invasion of Ukraine, and now with prices soaring and real concerns about supplies, there are serious implications for farm profitability.”

To diversify our food supply in response to the related global crisis, [ARC2020](#) has made the following, among other policy suggestions:

- Fast track food ombudsman in remaining member states to work on minimum and maximum prices, for the benefit of citizens and farmers.
- Start to fund the growing of crops (cereals, beans etc) for human consumption as opposed to feed for livestock, and concurrently reduce the quantities for pigs, poultry and biofuels. Compensate pig and poultry farmers for financial loss.
- Farmers who can successfully grow feed crops for extensive livestock production, ideally integrated into mixed farming systems, should be incentivised to do so, especially in contexts where there are few negative environmental consequences.
- Incentivise more oil seed production in Europe for human consumption, not fuels, to increase EU self sufficiency in oil seed.

The untapped potential of the tree fruit sector in Ireland

By Cornelius Traas, The Apple Farm, Co Tipperary

Apples

The retail value of apples sold in Ireland is about €120 million each year. Ireland supplies between 3% and 5% of this market. Due to the large culinary (cooking) apple industry in Co. Armagh, the island of Ireland is more than self-sufficient in culinary apples. In comparator countries (UK, Denmark, Sweden), about one third of the dessert (eating) apples sold in the marketplace are domestically grown. This would imply a retail potential in Ireland of about ten times current penetration.

About 800 to 1,000 hectares of apple plantation would be needed to supply the market at that level. Typical commercial orchards in Ireland are 10 to 20

hectares (ha) in size, implying a potential for about 60 such orchards. An associate benefit of apple orchard plantation is that it is the only significant food crop grown in Ireland which also sequesters carbon. At a sequestration rate of about 11 tonnes of CO₂ per ha per year, an annual sequestration of about 10,000 tonnes could be expected.

There are a limited number of sites in Ireland suited to commercial apple production. There is also a lack of expertise on apples in the training and advisory services. It will not be possible to increase the industry size until this is addressed.



There is potential for up to 1,000 hectares of apple production to meet national demand in Ireland, which currently only supplies between 3% and 5% of its own market for eating apples. Photo © Oliver Moore

The untapped potential of the tree fruit sector in Ireland

Ireland is a high labour-cost economy, and apples are a high-labour input crop. Apples can be grown cheaper in lower-wage economies within the EU, and beyond, and even allowing for transport costs, can arrive here at a lower cost than it is possible to grow equivalent apples in Ireland. Irish apples must therefore sell at a significant price premium compared to many imported apples.

There is also uncertainty about the market acceptability for apple varieties that grow well in Ireland. The most common apple varieties sold at retailer level (Gala, Pink Lady, Granny Smith etc) are not suitable for growing in Ireland. Cider apples are also grown in Ireland. These are different horticulturally and market-wise to dessert and culinary apples. At the moment the market is oversupplied with cider apples.

Organic apple production is not a viable prospect with the exception of cider apples. Most organic apples are grown in arid climates where fungal diseases are not an issue. While advances have been made with disease-resistance in apples, so far these advances are confined to too small a range of the diseases that result in damage to the crop. There is also considerable uncertainty about the effect that the rapidly changing climate will have on apple production potential in Ireland.

Pears

There is almost no commercial production of pears in Ireland. About half the pears sold in Ireland are varieties that are known to grow (at garden scale) in Ireland. The number of sites suitable for pear cultivation in Ireland is more restricted than sites suitable for apples, due to their earlier bloom, and consequent exposure to potential late-spring frosts.

Pears grown in Ireland would need to command a significant price premium, for the same reasons as outlined for apples. The other considerations outlined above apply equally to pears.

Sweet cherries

With the recent innovation of dwarfing rootstocks for cherries, sweet cherries can be grown in Ireland. They require protection, in the form of “Spanish tunnels”, or similar structures, to protect from rain crack, rot organisms, bird damage, and infestation with SWD (spotted wing drosophila).

Due to the need for protection, and the high-labour costs relative to locations where cherries are grown (especially eastern Europe and Turkey), the price of production of cherries in Ireland is multiples of that in other countries. However, in the UK, sweet cherries are grown under protection, and their market is supplied by about 6000 tonnes of domestically produced cherries each year, competing successfully with imported production due to the superior quality and fresher product. By comparison, it should be possible to grow about 20 to 40 hectares of cherries in Ireland for supply to the Irish market. It is worth mentioning that Ireland’s largest grower of cherries stopped production last year, due to horticultural difficulties in achieving crop set.



There is significant untapped potential for fruit production in Ireland. Photo © Oliver Moore

Cornelius Trass runs The Apple Farm in Co. Tipperary, where the orchards produce a variety of apples, strawberries, raspberries, cherries, plums, and pears.



Feeding the soil food web to reduce fertiliser use

By Bridget Murphy, Talamh Beo

For a transition to be a just transition, we need the foundation upon which it is built to be just. That means equality. Equality in access to resources, equality in distribution of CAP direct payments. The system we are transitioning away from is inherently unjust and this needs to be remedied.

Equality is also relevant to the contribution of those currently excluded from the table of stakeholders. The transition of our food and farming system is being discussed in the absence of farming women, and in the absence of agroecological farmers. Given agroecology and women have a role to play in a future with food and seed sovereignty, they must be part of the process to define that role.

Producing food for an increasing global population is happening in a context of extreme and erratic weather and natural disasters, where severe pressure and conflict already exists around natural resources like water and arable land. Climate change adds further realities of decreasing yields and failing crops, along with a perfect storm of natural and manmade challenges. Brexit, Covid, and now Putin’s invasion into

Ukraine are but a few critical issues which are forcing some very pertinent discussions on food security.

If we are going to talk about food security – that is ‘producing enough food for the world’s population’ – then we need to start with the question of what food we are producing, and how we are producing it. We also need to talk about the quality of the food we produce. It makes no sense to produce vast quantities of nutrient-deficient food and then waste half of it, while we undermine the natural resource base we depend on to produce the food – namely the soil.

Globally, scientists are speaking about soil fertility depletion, and about how tilling, chemical fertilisers, sprays and pesticides are harming our food sources. Modern industrial farming practices which focus on economics and competition, efficiencies and technological innovations do not allow the soil to regenerate properly. As most produce, except sea food, is grown in soil, a key to maintaining global food security is fixing or regenerating and then nurturing our soils. Soil Security is food security.



Talamh Beo’s EIP is focused on regenerating and nurturing our soils in the interests of food security. Photo © Oliver Moore.

Feeding the soil food web to reduce fertiliser use



Kevin Dudley running a seed saving course at CloughJordan Community Farm. Seed sovereignty is a critical part of a just transition, according to Talamh Beo. Photo © Oliver Moore

Learning how to do this in practice is the aim and purpose of Talamh Beo’s Soil Biodiversity EIP. Through the EIP, we are learning that carbon feeds the soil and the soil food web, and they in turn feed the plants, providing yields of nutrient-dense foods that are appropriate to our individual ecosystems, climates and cultures.

The soil food web refers to the multitude of life forms in the soil. These life forms range from microscopic one-celled bacteria, algae, fungi, and protozoa, to larger nematodes, arthropods, earthworms, insects, plant roots, and small animals. These life forms break down organic matter, aerate the soil, prey on unwanted pests, and make nutrients available to the plants. In one teaspoon of soil alone, there may be over 600 million bacterial cells.

Chemical fertilisers and pesticides, however, adversely affect many of these beneficial life forms in the soil, killing them or causing them to migrate or go dormant. Chemical fertilisers are also highly soluble in water. They leach into groundwater before the plant has ‘used’ them. They also seep into the subsoil, where they interact with clay, forming impermeable compacted layers. With compacted soil, and in the absence of certain soil bacteria which break down organic matter into plant nutrients and help convert nitrogen from the air into a plant-usable form, soil health is negatively affected. Plants become addicted to the chemical fertiliser as they are unable to get their nutrients from the soil via the soil food web.

Feeding the soil food web to reduce fertiliser use

Soil bacteria which regulate diseases are lost, and so too is the function of keeping bugs, grubs, and other parasites in check. Plants growing in these unhealthy soils are attacked by disease, pests and parasites, and the solution is to apply more fertilisers and pesticides, furthering the deadly spiral.

With the current focus on the war in Ukraine and the shortage and high cost of chemical fertilisers, now would be the right time to transition away from chemical fertilisers and towards regenerating soils – breaking the addiction. Despite industry claims to the contrary, agroecological systems that do not use chemical fertilisers are resilient and productive.

However, the industrial agriculture system has responded by ensuring supports are available to assist farmers with the increased input costs of imported grain for feedstock, and chemical fertilisers, essentially doubling down on the damage to the soil – ironically, in the name of food security.

Talamh Beo practices and advocates for agroecological systems of agriculture focussing on regenerating and building soil health and soil carbon, supporting seed and crop diversity, providing food and habitat for pollinators and other wildlife, and producing local, seasonal food with short supply chains. Soil security is food security.

Bridget Murphy is a farmer and project manager of Talamh Beo's soil biodiversity, literacy and enhancement EIP. Talamh Beo is a grassroots organisation of farmers, growers and land-based workers on the island of Ireland.

Diversifying at level 2 (on-farm)

On-farm diversification involves using farm resources to create income streams from new services or products. Some examples of on-farm diversification include food processing and selling, social farming, educational activities, renewable energy, agritourism, landscape management and ecosystem services. [Cork dairy farmer Tom Dineen, for example, expanded into farmhouse cheese production](#) in 2015. He described this as, “an alternative means to expand and sustain my dairy farm business when conventional expansion due to limited land availability has not been an option”. Barry Caslin of Teagasc [says](#) that “diversification may not be practicable for every farmer, but well planned and seasoned projects can create new sources of income... and can

enhance the range of facilities available in Ireland’s rural areas.”

The [‘Towards...’](#) (p39) policy paper says that one way to open up new economic opportunities for farmers and mitigate the risk associated with “single modes of food production” is to encourage on-farm diversification, “such as agroforestry, horticulture, mixed organic farming, agri- and eco-tourism, and social farming,” along with adequate supports for farmers. [Dr. David Meredith of Teagasc says](#) that diversification should be particularly encouraged in “national priority areas” such as bio/circular economy, energy production, tourism, and food.



*The popularity of farm stays and farm accommodation is increasing, but there is still much untapped potential.
Photo © Michelle Carey*

Meanwhile the government’s [‘Our Rural Future’](#) (p79) plan states that “the economic and environmental challenges facing the agri-food sector can be offset through diversification of activity at farm level and in the wider rural economy”. The plan says that “sus-

tainable land uses such as forestry, bioeconomy, and renewable energy-related development offers potential to deliver higher returns than many other farm enterprises.”

Diversifying at level 2: public goods

Diversifying at level 2: forestry

In recent years, one diversification option for farmers has been planting forestry, to be eventually harvested and sold for timber. Sitka spruce is one of the most commonly planted tree species, [covering](#) 51.1% of Ireland's forest area. But these plantations have met with resistance from rural groups such as [Save Leitrim](#), who see them a threat to “the viability and sustainability of our small farms and businesses in our villages and towns.” Sitka spruce plantations have been [implicated in](#) “driving bird species to extinction” and of failing to offset carbon emissions to the degree claimed by their proponents. They have been associated with [biodiversity loss](#) and [damage to freshwater environments](#). [Close to nature](#) and [continuous cover forestry](#) have the potential to deliver public goods and benefit biodiversity, but are not yet widely supported by public policy.

Diversifying at level 2: public goods

The EPA's 2020 [report](#) 'Ireland's Environment: An Integrated Assessment' says that “farming, when carried out in a manner that is sensitive to the environment, can provide valuable ecosystem services to society, ranging from protecting water from pollution to maintaining nutrient cycles and enhancing biodiversity. These broader ecosystem services need to become an increasingly important part of day-to-day farming in Ireland.”

Ecosystem services or public goods may include clean water, clean air, rural vitality, carbon sequestration, food security, floodwater attenuation and biodiversity enhancement.

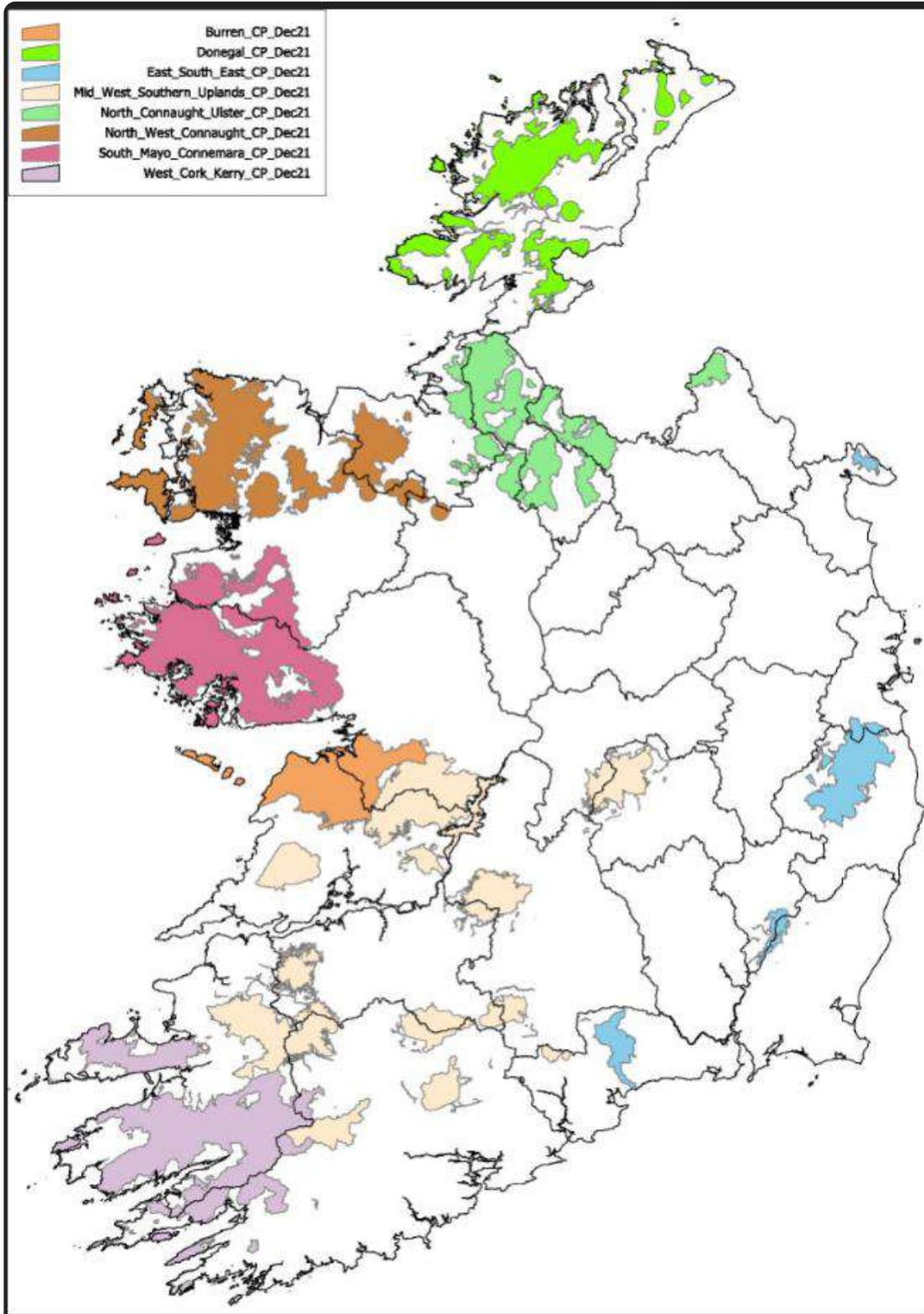
[‘Towards...’](#) calls (p41) for agricultural subsidies to be re-oriented into the delivery of “public goods that deliver landscape and catchment-scale environmental and socio-ecological benefits”. However, it states that Ireland has now gotten to the point where “agriculture is now responsible for an erosion of the important public goods and services that these ecosystems provide.” It says (p17) that “habitat fragmentation, land clearance, afforestation, widespread drainage of wetlands and damp pastures, severe de-

clines in mixed farming, land abandonment, hedge-row removal and reduction, and increase in intensive management of grasslands have all contributed to this deterioration.”

[BRIDE](#) (Biodiversity Regeneration in a Dairying Environment) is one project that rewards farmers with results-based payments for delivering public goods: in this case, improving habitats over a five-year period. BRIDE is based in the River Bride catchment of north-east County Cork and west County Waterford. It aims to have at least 10 per cent biodiversity managed area on each participating farm. BRIDE is a European Innovation Partnership (EIP) funded by the Department of Agriculture, Food and the Marine (DAFM) under the Rural Development Programme 2014-2020. [The guidelines](#) provided to farmers are “designed to be both practical and manageable for farmers who want to improve biodiversity, water quality and carbon sequestration on their farms.”

In regions dominated by intensive dairying, locally managed projects such as BRIDE (see above) may be the most feasible option in the short term for farms to diversify their land and deliver public goods, without the need for major changes in their set-up. Across parts of Ireland with more ‘marginal land’, including large areas of the west and upland regions, the [co-operation projects in Ireland's CAP strategic plan](#) will encourage farmers to work together to deliver targeted environmental benefits like biodiversity and water quality. Participating farmers will be eligible for payments of up to €10,500 per year. Project teams will establish local environmental priorities and offer advice and training to farmers. Farms will be scored at regular intervals based on habitat quality, and payments will be results-based. Tenders to manage the projects across the eight regions were being evaluated as work on this report neared completion. All farmers in the designated areas will be eligible to participate.

Diversifying at level 2: public goods



The co-operation project areas proposed under Ireland's new CAP Strategic Plan

Diversifying at level 2: carbon farming

Question: How could the delivery of public goods be prioritised in diversification and public policy? How can these be delivered nationally, rather than just within specific project areas? How can more intensive farms also deliver environmental co-benefits?

Diversification at level 2: carbon farming

Carbon farming has received much attention for its potential to bring new revenue streams to finance the agro-ecological transition. Like diversification, the climate abatement potential of carbon farming is also marked ‘to be determined’ in Ireland’s [Climate Action Plan](#), but the plan does aim to “develop an enabling framework to facilitate the roll out of a national carbon farming programme” (p164).

“Carbon farming is the process of changing agricultural practices or land use to increase the amount of carbon stored in the soil and vegetation (sequestration) and to reduce greenhouse gas emissions from livestock, soil or vegetation (avoidance),” [according to one definition](#).



*Soil in the hands and on the farm in Cloughjordan.
Photo © Eoin Campbell (Sustainable Projects Ireland)*



Carbon farming aims to increase the amount of carbon stored in soil and vegetation. The no dig system pictured here at Cloughjordan Community Farm helps to keep carbon in the ground. Photo © Jess Schoening

It offers the potential to diversify farm incomes if given appropriate support, but there are pitfalls, including the risk of [land speculation](#). An alliance of institutions and individuals from the fields of nature conservation, environmental protection, agriculture and science have [spoken out](#) against the use of carbon emissions certificates and raised other concerns. In [‘Feeding Ourselves’](#), activist Saoirse McHugh proposed creating a “land observatory” (p41) in Ireland to track land ownership and price.

Carbon farming: the right way & the wrong way

By Dr. Douglas McMillan, Green Restoration Ireland

Threats and opportunities

Carbon farming done the wrong way promises a land grab particularly of more marginal lands. On the corporate side, polluting activities (airlines etc) will avoid reducing their emissions by greenwashing through carbon offsets. Within farming, bigger farmers may buy lands to offset the carbon footprints of large herds.

However, carbon farming done correctly offers a clear and present opportunity for Irish farmers to diversify and to maintain family farms and rural communities. 'Green CAP', results-based payments offers one main income stream and verified, *high-quality* carbon credits, which integrate biodiversity and water quality, offers the second.

The first premise will be presented in the form of the need to deal with the immediacy of climate change, separated out from all other issues of depopulation, biodiversity loss and pollution.

Positive solutions

The reality is that fighting climate change cannot be uncoupled from restoration of biodiversity, addressing associated issues of pollution, engaging the wider population and especially maintaining people on the land to do this work. This will lead to a sustainable Ireland where our natural capital is restored in a way that generates income for rural communities. To ensure that this positive vision prevails, all carbon farming must be based on principles of: 1) energy management, 2) ecosystem management, 3) high-quality offsets and 4) co-operatives.

Hierarchy of energy & carbon management

Any parties engaged in offsetting must first produce a verifiable carbon footprint followed by reduction of this footprint as per the [hierarchy of energy management](#), namely, avoidance or reduction of greenhouse gas emissions, use of more energy-efficient technologies and then investment in renewable energy. Only after sustained efforts in these areas should carbon offsetting of residual emissions through carbon farming be permitted.

Ecosystem management

Ecological theory recognises that healthy stable ecosystems result when biodiversity, structural complexity of ecosystems and habitat connectedness are maximised. This enhances ecosystem resilience, strengthens them against disturbance and supplies the genetic resources necessary to adapt to long-term change i.e. climate change, disease etc.

In farming terms, this includes such practices as multi-species swards and mob grazing to replace fertilisers, creation of additional habitats (e.g. hedgerows, beetle banks, ponds), planting of standard trees, retention of field margins, fallowing for tillage, hedge laying etc.

Meanwhile, paludiculture or 'wet' agriculture will offer the possibility of locking carbon in rewetted peats, and sequestering carbon in valuable new natural resources for food, feed, energy and construction.

Carbon farming: the right way & the wrong way

Verified, whole-farm, high-quality carbon footprints will quantify levels of soil carbon, above-ground biomass and carbon stores in peat, as well as levels of biodiversity and water quality. Farmers will ‘farm’ carbon for their own benefit in terms of results-based payments or sale of carbon credits and carbon-neutral / positive products. Eco-food schemes will create brands of e.g. ‘peat-friendly’ products, while eco-tourism will also benefit the wider community.

Co-operative approaches

In practical terms this shift will require the mutual support of farmers in line with co-operative traditions to create e.g. eco-schemes and to collectively rewet whole bogs. Relevant agencies must provide technical advice and financial support for carbon farming, and develop schemes and standards required for the monitoring, reporting and verification (MRV) of carbon credits and eco-friendly products. Research institutions must develop farmer-friendly technologies and apps to facilitate measurement of the farm environment. Irish businesses and citizens must purchase produce and credits in a society-wide effort to establish carbon-positive towns and regions. The opportunities generated by these synergies will form the bedrock of future sustainable and vibrant rural communities.

Dr. Douglas McMillan is co-founder and chairperson of Green Restoration Ireland, whose mission is to support community development through restoration of the Irish landscape.

Diversification at level 2: co-operatives

Diversification at level 2: co-operatives

Co-operatives can help farmers to capture a greater share of the value chain and also foster shared ownership of food production. Co-ops are farmer-owned, so they can set what they deem to be fair prices for farmers. They could play a key part in a just transition for farmers and rural areas, helping to keep wealth in local communities.

Co-ops can also be an effective way to support local economies and enhance community wealth building (CWB). CWB is a place-based [“practical systems approach to economic development, which is built on local roots and plurality of ownership.”](#) Its supporters see it as having the potential to, [“create the kinds of democratic, inclusive and community-based economies we need – economies truly centred on collective well-being, local resilience, ecological sustainability and economic justice”](#) (p iii).

Dr. Noreen Byrne, a lecturer in UCC’s Centre for Co-operative Studies, says in [‘A Question of Scale’](#) (p13) that “co-operatives, as user owned and controlled enterprises built on sound principles of equity and fairness, have huge potential” in dealing with precarious work, unstable supply chains, and environmental degradation. Byrne suggests that existing co-ops should lead in re-organising the economy “to work for people”. While ‘A Question of Scale’ notes that “some co-ops can act as what Silvia Federici calls gated commons”, prioritising members but not especially useful for outsiders, overall “the co-operative ideal represents a strong basis to build from.”

[TASC](#) (p37) proposes that “creating community businesses would also enhance outcomes for both producers and consumers. For example, producer or consumer-led co-operatives enabling the development of local abattoirs, creameries, or shops that give the community ownership over more of the supply chain and thus enhance local outcomes. Similarly, introducing regulations to limit the size of supermarkets depending on the area in which they are built would give local businesses the opportunity to develop and sustain.”

Existing dairy co-operatives in Ireland, such as the Carbery Group in County Cork, show what can be achieved when co-ops work together. The Carbery Group is a federation of four dairy co-operatives. The milk prices it pays have historically been high, while the on-the-ground impact of the co-ops demonstrates a version of wealth generating and sharing. The structure of the group allows for resource-sharing between co-ops, and for economies of scale. Extra economic activities such as machinery repair and agri-inputs are in many cases controlled by co-ops within the federation, which has a positive effect on local employment.

Hemp Co-operative Ireland is a recently established co-op that has supported diversification on Irish farms. The Irish hemp industry is young, but because [hemp can be grown “on a wide range of soil types”](#), it may be a realistic diversification option for many farmers. Hemp requires low inputs, is a spring-sown annual crop, and conventional farm machinery can be used to grow it. However, a hemp processing factory must be within a “feasible distance” of the farm, and a licence is required to grow it. Policy support that makes the paperwork less challenging, that funds advances in processing, and that facilitates training for farmers, could kick-start this industry. Similarly, moving control of the crop to the Department of Agriculture would be beneficial, and has been requested by the co-operative in its [recent Dáil submission](#).

One Cork-based farmer, Bill Buckley, [told the Farmers Journal](#) it was “not possible to make a living” in drystock farming, so if he “wanted to continue farming”, he knew he would have to “find something else”. Bill’s ‘marginal’ land was suitable for growing hemp alongside cattle-rearing. After he reached out for guidance to Kate Carmody, chairperson of [Hemp Co-operative Ireland](#), she encouraged him to grow the crop. The market for CBD has grown in popularity in recent years within the health and wellness sector. According to the Farmers Journal, the hemp co-operative is key for “support and knowledge-sharing purposes...because growing hemp in Ireland is no simple thing. Paperwork, harvesting and processing require serious effort.”

Landscape-based approaches to a just transition: leveraging off the co-ordination and embedded capabilities of co-operatives

By Dr. Noreen Byrne, Centre for Co-operative Studies, University College Cork

Although geography would seem to be increasingly demoted within the Irish second level educational system, there is also [increasing recognition of its centrality to sustainable development and a just transition](#). The importance of a geographical perspective is highlighted in the renewed focus on landscape approaches to land management and environmental challenges, as sectoral or high-level approaches tend to have limited success. A landscape approach [can be defined as a](#) “framework to integrate policy and practice for multiple land-uses, within a given area, to ensure equitable and sustainable use of land while strengthening measures to mitigate and adapt to climate change”.

A landscape approach integrates existing interventions and multi-stakeholders to simultaneously meet environmental and socio-economic challenges in a particular region. The AGRI-EIP Projects, Water Framework Directive catchment areas, and the new co-operation projects (CPs) as part of CAP new’s agri-environmental and climate measure (AECM) are all generally landscape-based.

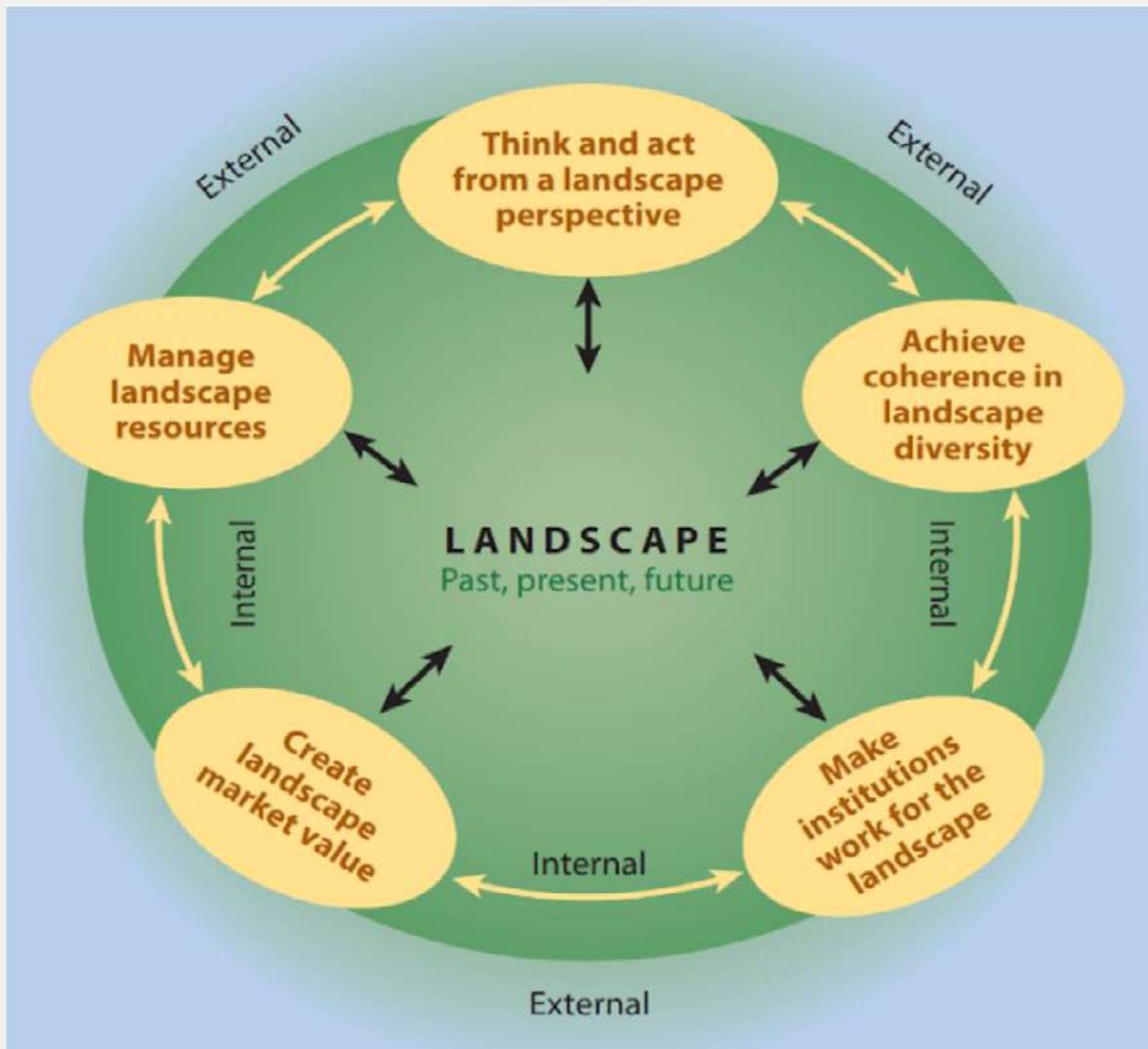
It has been noted that [landscape approaches are attractive conceptually but challenging in practice](#). Some key factors that hinder successful landscape

practice are engagement from stakeholders, access to financial and data resources, and overall institutional governance. An number of authors [stress](#) the importance of “coordinating institutions” and local institutional embeddedness, along with stakeholder and institutional capability for a sustained and successful landscape approach.

Co-operatives which tend to be locally embedded, with access to farmers and wider community stakeholders, and access to financial and data resources, should have the co-ordination capability necessary to contribute to successful and sustained landscape approaches.

This co-ordination value of co-operatives for landscape approaches is further highlighted by the Wageningen Centre’s [Landscape Governance Capacity Framework](#), where co-ordination is central to four out of the five steps outlined in the framework. Co-operatives have the ability to create coherence between a variety of stakeholders; to “work for the landscape”; to create “landscape market value” and to manage “resources through endogenous management systems”. The Wageningen framework is presented in greater detail below.

Landscape-based approaches to a just transition



Landscape governance capacity framework (Wageningen Centre for Development Innovation). Taken from [Arts et al \(2017\)](#).

In addition to highlighting the role of co-ordination to the success of landscape approaches, emphasis is also put on the role of an “existing and functional” institutional framework. Co-operatives, as embedded entities, are one such existing institution with co-ordination ability and access to both farmers and community stakeholders.

However, while co-operatives tend to be embedded and landscape-based, a fact that enables them to play this coordinating institutional role, they may be less proficient in “thinking landscape” as advocated by the Wageningen model outlined above. A shift in orientation would seem to be required here in order for co-operatives to successfully meet the current

socio-economic and environmental challenges facing agriculture.

The Centre for Co-operative Studies at UCC is currently exploring the relationship between the delivery of agri-advice through co-operatives, and the potential to further enhance agri-advice and its delivery through landscape-based approaches and co-ordination across co-operatives.

Dr. Noreen Byrne is a lecturer at the Department of Food Business and Development, and a researcher at the Centre for Co-operative Studies, both at University College Cork.

Diversification at level 2: direct sales

Direct selling is another opportunity for farmers to diversify and take more control of their share of the value chain. [Teagasc lists](#) the advantages of direct selling as the following:

- Helps forge links between local producers and consumers
- Vendors control pricing, which helps increase turnover
- Instant consumer feedback, to inform decision making
- Test new products with low overheads and low risk
- Build brand and customer loyalty
- Sustainability – reduce carbon footprint and food miles

New online marketplaces, such as [‘Open Food Network’](#) (OFN), that allow farmers to sell their products at the price they choose, show how digital innovation can facilitate direct sales and shorter supply chains.

The [‘Feeding Ourselves’](#) report says (p54) that OFN “offers a digital solution to the conundrum of direct sales for small scale agroecological producers in sparsely populated rural areas – as well as a non-proprietary community embedded tool to revitalise rural economies.”



Produce available at the North Tipperary Online Farmers Market, Cloughjordan. Direct sales and digital innovations such as the Open Food Network give farmers more control over pricing and build stronger links with local markets. Photo © Eoin Campbell (Sustainable Projects Ireland)

Diversification at level 2: direct sales

“Small-scale local food producers selling directly provide multiple benefits to the local environment, community and economy,” says organic farmer Thomas O’Connor of Talamh Beo, who produces meat, eggs, salad and vegetables in Kerry, and runs Manna Organic Store in Tralee. “The production and consumption of food in short chains means increased economic and social activity in rural areas. The produce from these farms can get to the customer very quickly and is therefore very fresh and of high quality. Local food production systems have the potential to provide increased local employment, while reducing the environmental cost and negative effects on the climate. They are more resilient to economic instability, and more likely to stay functioning in adverse conditions like those posed by climate change.”

Diversification at level 2: other examples

[Social farming](#), educational activities, renewable energy, and agritourism are other potential diversification opportunities that may be appropriate for farmers. ‘[Our Rural Future](#)’ says there is “much potential in the agri-tourism and gastro-tourism sectors” (p79). The Burren, County Clare is a place where agri-tourism has been well-received, where “food trails, foraging walks, food visitor experiences and farm stays” have become popular [according to the](#) CEO of the Burren Ecotourism Network. Gastro-tourism is also high on the agenda for [Fáilte Ireland](#).

Farm diversification: a pathway to just transitions for farms & rural communities

By Dr. David Meredith, Teagasc

Introduction

The EU [‘Farm to Fork Strategy: For a fair, healthy and environmentally-friendly food system’](#) sets out the current EU vision for the creation of a sustainable food system within the EU. The strategy places an emphasis on ensuring that the transition to carbon neutrality set out in the EU Green Deal is just, with all citizens and operators across value chains, in the EU and elsewhere, benefiting. It also recognises that a transition to sustainability of the food system will change the economic fabric of many EU regions and their patterns of interactions. The primary means of dealing with these issues is to preserve the affordability of food, “while generating fairer economic returns in the supply chain, so that ultimately the most sustainable food also becomes the most affordable, fostering the competitiveness of the EU supply sector, promoting fair trade, [and] creating new business opportunities” (Farm to Fork strategy, p7).

Though not specifically mentioned, farm diversification is one of the means foreseen for creating new business opportunities. It also offers the potential to generate fairer returns in value chains by either reconfiguring them (shorter chains) or creating added value. Development along these lines supports greater community wealth generation, i.e. ensuring that the wealth generated by workers, local people, communities, local enterprise and business flows back to them. Farm diversification has long been supported through the EU Common Agricultural Policy. Notwithstanding this, the level of diversification remains low.

Farm Diversification in Ireland

Analysis undertaken using the [2010 Census of Agriculture](#) and the [Farm Structures Survey \(2016\)](#) establishes that there has been an increase in the number of farms with non-agricultural gainful activity from 12,800 (9% of the total) to 16,400 (12% of total). This rate is substantially above the EU average of, roughly, 5.2% (European Parliament Research Service, 2016). The average number of additional enterprises per farm increased from 1.1 to 1.2 over this period indicating that some of the growth was driven, in part, by ‘serial diversifiers’.

A more detailed analysis identifies that the growth in the level and rate of diversification is associated with expansion of on-farm afforestation (+56%), and agricultural contracting (+90%) These data indicate that ‘near-agriculture’, that is utilisation of farm resources, e.g. land for forestry, or machinery and labour for contracting, are more accessible or attractive to farm holders compared to other options. They are relatively low cost and do not necessarily require development or deployment of new skills. There was significant expansion in the processing of farm products (+420%) during the 2010 and 2016 period. The latter activity has grown from a very low base since 2010, so much so that it has overtaken farm tourism as the third most prevalent form of diversification. The growth in the processing of farm products points to an increasing interest in and demand for added value farm products. In contrast to this sector, the development of farm tourism has, according to the data, effectively stagnated. This is interesting in the context of the substantial growth in the total number of visitors to rural attractions since 2010, particularly those proximal to the Wild Atlantic Way.

Conclusions

The [Food Vision 2030](#) strategy identifies the need for measures to develop diversification options and to strengthen the position of primary producers in the supply chain, as these can all play an important role in building socio-economic resilience, improving or sustaining farm viability, and, ultimately, contributing to a just transition. As outlined above, farm households are actively engaged in the diversification of farm enterprises though the overall numbers are relatively small. To further support these activities, research is needed to understand market developments supporting the development of added value farm products and their contributions, both social and economic, to farm households. There is also a need to assess the evolution of the rural tourism market in Ireland and the degree to which rural enterprises, particularly small scale accommodation and attractions, are positioned to benefit from market development.

One area not mentioned so far is the production of renewable energy. This offers significant potential for both individual and community wealth generation, in addition to contributing to national energy security objectives. The first Renewable Electricity Support Scheme (2021) included seven community projects and it will be important to learn from these in terms of good practices in order to develop appropriate models and supports that benefit rural communities in the future.

Dr. David Meredith is a senior research officer with the Rural Economy Development Programme at Teagasc.



Paludiculture: towards farmed, wet peatlands

By Niall Ó Brolcháin, NUI Galway

To facilitate the new environmental ambitions of the post 2020 Common Agricultural Policy (CAP), and to create coherence between agricultural and climate policies, we must safeguard and stimulate the preservation of carbon-rich soils through protection of peatlands. In Ireland around 10 million tonnes of greenhouse gas emissions come from degraded peatlands each year, and under the EU Green Deal land use practices will need to change.

However, farmers need certainty and the introduction of guaranteed eligibility of farmed wet peatlands for CAP payments, while payments for drained peatlands are phased out. Long term results-based agricultural payment schemes (RBAPS) are also necessary to maintain high value peatland ecosystems.

Drainage-based agriculture on peatland causes enormous economic and environmental losses through CO₂ emissions (25% of EU agricultural emissions from just 3% of EU agricultural land), loss of biodiversity, water

pollution, soil degradation, and subsidence followed by an eventual loss of productive land. Rewetting (i.e. raising the water level near to the surface) is essential to minimise emissions and peat degradation, but also impedes drainage-based land use. Paludiculture or wetland farming should soon be recognised as “agricultural activity” and “eligible hectares”.

With paludiculture, peatlands are kept productive under permanently wet, peat-conserving and potentially peat-forming conditions. Thus, it is a blueprint for peatland carbon farming while still producing food, feed and energy. Co-benefits of paludiculture could contribute to the objectives of EU Green Deal policy by maintenance and restoration of multiple ecosystem services such as water buffering, nutrient retention, local climate cooling and habitat provision for rare species, while allowing agricultural production simultaneously. Paludiculture is seen as a low-emission land use alternative for peatlands.



Paludiculture can include planting of cattail for insulation material, harvesting of sedges for energy production, grazing with water buffaloes for food and sphagnum farming for horticultural substrate. Photo © Greifswald Mire Centre

Paludiculture: towards farmed, wet peatlands

Paludiculture is defined as productive land use of wet peatlands that stops subsidence and minimises emissions. In contrast to drainage-based agriculture, paludiculture cultivates crops that are adapted to high water levels, such as reed, cattail, black alder and peat mosses. It can have a higher value both financially and ecologically. Using a variety of established techniques, the products of paludiculture can be processed to use as insulation and construction materials, growing media and bio-refinery products, as well as for livestock fodder and fuel. Innovative products, including cosmetics, medicinal and food products, are under development.

Large-scale implementation of paludiculture, however, requires markets to be established and agricultural policies to set explicit incentives that ensure that it becomes advantageous for landowners to rewet drained agricultural peatlands and subsequently to maintain them as wetlands.

Implementation of carbon farming on peatlands requires the introduction of specific payments for keeping carbon in the ground. This could be granted via public payment or appropriate credit schemes for farmers who wish to avail of carbon credits through the voluntary carbon market at regional and national levels. These schemes can be supported and recognised by the CAP and governments in EU member states.

We must facilitate results-based agricultural payments schemes (RBAPS) specifically for peatlands to ensure that wet peatlands can be maintained to a high standard. Landowners should not lose out by actively maintaining wet peatlands, so that greenhouse gases are reduced or peatlands can act as net carbon sinks. A time and cost-effective monitoring system of GHG emissions at parcel level across different land uses and management regimes has to be developed and implemented to allow for sound MRV (measuring, reporting, and verification).

The CAP framework is generally suitable for realising an EU wide realignment of peatland maintenance and supplying co-funding for reaching the stated goals. Additional support may come from the European Regional Development Fund (ERDF). For more [see here on ARC2020](#).

Niall Ó Brolcháin is a researcher/lecturer at NUI Galway specialising in peatland restoration and greenhouse gas reduction.

Level 3: off-farm diversification

Off-farm diversification involves members of a farming household finding employment or income off the farm in unrelated activities, sometimes complementary to farming. Typical examples can include contracting, teaching, consultancy, and construction. This type of diversification can be viewed as a positive way for farmers to use their skills in other contexts, to augment their income, and to improve their financial security.

According to the [2020 Teagasc farm survey](#), the average income on cattle rearing farms in 2020 stood at just €9,043, compared to the average dairy farm income of €74,249. The survey noted that “only 1 percent of Cattle Rearing farms earned more than €50,000 in 2020”. With some farms not providing

sufficient livelihoods, farmers may need to seek off-farm employment.

Off-farm employment is not evenly distributed across regions and farming sectors. In 2020, the west had the highest percentage of farmers employed off-farm, at almost 50%, while in the south less than 25% had off-farm employment. Unsurprisingly, the survey notes that drystock farmers are more likely to supplement farm income by also working off-farm. Professor Gerry Boyle, the former director of Teagasc, [referred](#) to off-farm employment as a “fact of life” for the majority of drystock farmers. Addressing this income imbalance between sectors will be an important part of a just transition.



Low incomes on many cattle-rearing farms in the west of Ireland force many farmers to seek other sources of income off-farm. Photo © Matteo Metta

Balancing off-farm employment with farm work can be a real challenge. The pressure to find off-farm work can mean shifting farm tasks to mornings, evenings, and weekends. There is a risk that the limited income of cattle-rearing, sheep, and tillage farms may be unappealing to the next generation. This could potentially alienate farmers from the vocation, and dissuade their children from a future in farming, too.

[Social Justice Ireland](#) says that “advances in technology and mechanisation” have enabled many farmers to “seek alternative ways to generate income”. From the mid-1990s in Ireland, “off-farm employment by farmers increased significantly,” but many of these jobs were lost during the recession in the 2000s.

Level 3: off-farm diversification

According to the [Our Rural Future \(2021-2025\)](#) plan, digitalisation and new technologies will support “the diversification of rural economies into new and emerging sectors” and this will “further strengthen the employment base in rural areas and improve career opportunities for young people”.

Digital and physical connectivity will be critical for diversification in rural Ireland. ‘Our Rural Future’ says (p8) that improved transport infrastructure and digital connectivity has enabled the growth of new rural enterprises in sectors such as life sciences, agri-tech and renewable energy. The plan also commits to the development of a new sustainable rural mobility plan (p65).

However, [research](#) by Dr Páraic Carroll and colleagues indicates that in rural Ireland, people with “low transport accessibility and low income” may be forced into car ownership to access employment, leading to transport poverty. Ensuring that rural communities have transport options beyond the private car will be critical for regenerating rural areas, accessing employment, and for tackling high transport costs and the GHG emissions linked with transport.

Enabling people to work from home, or from local co-working hubs, will also be critical. Our Rural Future committed €2.7 billion in the delivery of high-speed broadband to rural areas, through the National Broadband Plan (NBP). The NBP was to be a “key enabler of remote working in rural Ireland, with added benefits through reduced commuting time, lower transport emissions, a better work-life balance and improved quality of life.” Yet [Dr. Oliver Moore noted](#) in September 2021 that “by the halfway mark, out of a proposed 115,000 homes reached by end of year, just 4000 had in fact been connected to high speed.”

Question: Will diversification on Level 3 always be a ‘fact of life’ for some farmers? How could off-farm employment be a positive option for farming communities in terms of a just transition? How can it strengthen, rather than threaten, farm livelihoods and communities?

Barriers to diversification

If farm diversification has many benefits, why has its growth in Ireland been slow? Dr. Oliver Moore, communications director and editor-in-chief at ARC2020, [says in 'Feeding Ourselves \(p53\) that](#), “there are reasons we have not seen huge growth in farm diversification...but perhaps there are changes that can be made – in where value is added in the food chain and in how widely we think of diversification as an idea and practice. Diversification can be about far more than just introducing one extra agronomic practice.”

This is where ‘diversifying diversification’ comes in, encouraging us to think more broadly about what types of diversification are achievable, beneficial, and desirable for farmers and rural communities. Farmers will need support and financial incentives to diversify into new sectors. “Change requires the appropriate provision of guidance and supports, as

well as individual and community action,” according to ‘Our Rural Future’ (p80). EU and Irish policy-makers will need to reflect on what type of diversification is being encouraged and enabled.

Financial pressure

Financial pressure can stall diversification. The [2020 National Farm Survey revealed](#) that 64% of Irish dairy farmers had an average debt of over €110,000, with levels increasing over the past six years. The number of dairy farms with borrowings is much higher than any other type of farm, and the amount borrowed is significantly higher than other systems too. “Low prices for farmers encourage industrialisation, technology and debt; get big or get out,” according to [a report](#) written by Fergal Anderson for the Green European Foundation (p3). This discourages changes.

Average farm debt by farm system				
	Farms with borrowings		Average debt (farms with debt)	
	2019	2020	2019	2020
Dairy	64%	64%	117,039 €	116,243 €
Cattle Rearing	30%	28%	26,301 €	25,862 €
Cattle Other	34%	31%	35,072 €	40,687 €
Sheep	25%	26%	27,835 €	30,257 €
Tillage	32%	32%	60,901 €	43,408 €
All	37%	35%	61,237 €	61,590 €

The Teagasc National Farm Surveys 2019 & 2020 shows the average debt by farm system. Source: Teagasc National Farm Survey

Dairy farmer Kate Carmody suggests addressing this “financial treadmill” by allowing farmers to take out low interest loans from the European Investment Bank ([‘Feeding Ourselves’](#), p42). She notes that “most farm borrowing is short term at high rates,” putting farmers under pressure to pay loans back in just a few years. As an alternative, Carmody sug-

gests that Ireland accommodate “low interest land mortgages that can be passed on with the land,” as is done in other countries, along with more co-operatives, and support for them. Initiatives like this could enable farmers to diversify into more agro-ecological practices, with less risk.

Barriers to diversification

Cultural values slowing diversification

With specialisation and monoculture seen as more productive and efficient, diversification may appear counter-intuitive. Diversified practices may be viewed as inefficient or reversing progress.

When wet, peaty soils have been painstakingly drained by previous generations (in line with best

practice advice at the time), it is challenging to shift mindset to the idea that rewetting those soils will be **beneficial** for climate mitigation, carbon sequestration, and wildlife. This cultural shift may take time. Paludiculture, carbon farming, and payments for public goods may help to change how this type of land is viewed.



Ireland's wetlands are beneficial for carbon sequestration, water management and wildlife, but in the past public policy encouraged the drainage of many of these soils. Photo © Canva

The challenge posed by cultural perceptions of agriculture is exemplified by [Mad Yolk Farms](#) in County Galway. In early 2020, Brian Dilleen launched his chemical-free farm in Oranmore, Galway. The intention was to provide organically grown food for local customers from his no-dig market garden.

Some locals objected to the farm's plan to plant trees as a windbreak, as they were concerned that the windbreak would obscure views of Galway Bay. Permission to construct irrigation was then [denied](#) by the local planning department.

As Mad Yolk adapted the field (which was zoned for agriculture and amenity) for horticulture, concerns regarding a change of land use were passed on to An Bord Pleanála. "An Bord Pleanála will debate... whether growing vegeta-

bles is agriculture or not," [wrote](#) Lynn O'Keeffe, a horticultural teacher and grower in Galway.

O'Keeffe wrote that "we have become so used to livestock grazing every field that any other form of food production feels and looks wrong to some people." This case shows how cultural perceptions may hinder diversification in agriculture unless community buy-in is prioritised.

Question: What else has slowed diversification in Ireland on farms? What level of diversification is now possible and desirable?

Diversifying the rural economy

Redefining best practice

To encourage diversification on all three levels, it will be essential to redefine best practice. For several decades, best practice guidelines for farmers in Ireland have focused on efficiency and specialisation, which has had [detrimental impacts](#) on the environment.

TASC's [‘The People’s Transition’](#) report says (p33) that in this type of agriculture, “the labour of the farmer, combined with the cost of inputs and infrastructure, ultimately serve to primarily benefit supermarkets, agribusiness and their shareholders. Long-run gains to the family farm must be weighed against the ramifications that increased pressure due to debt, higher workloads or diminished services have for the well-being of the farmer.” There is now a need to redefine, and reward, best practice for producing nutritious food, along with public goods such as biodiversity, climate mitigation and thriving rural communities.

Framing

Dr. David Meredith of Teagasc also [advises framing diversification as entrepreneurship](#), because “entrepreneurship is not just about the business idea. It is the process of drawing on the knowledge, skills and personal attributes of the individual, identifying a potential opportunity and making connections with people, companies and agencies that can help them explore and realise the opportunity. Having a supportive environment for rural business development necessitates that capacity supports are in place from the very outset.”

Women in agriculture

The Women in Agriculture Stakeholders Group was established in 2021 with the goal of tackling inclusivity and gender balance in Irish farming in the next CAP. Women representatives from farm organisations across the country make up the key stakeholders. As the group’s [recent CAP submission](#) points out, women play a key role in farming in Ireland, yet their status often goes unrecognised. The report cites CSO figures indicating that over a quarter of people working on farms (71,700) are women, while only 3.8% of registered farm partnerships are in joint female/male names.

Dr. Sally Shortall, professor of rural economy at Newcastle University, [told RTE](#) that the biggest barrier to women farmers is inheritance. She said that, “there are a lot of women who do unrecognised work in the farm as the spouse, whether it’s book-keeping or developing farm diversification.”

Indeed, research by Dr. Maura Farrell, a senior lecturer in geography at NUI Galway, indicates that [women farmers are more open to farm diversification](#). Farrell [noted](#) that women are also more open to “going beyond productivist type of thinking in agriculture.” Farrell went on to say that, “Women are innovators, offering new opportunities through diversification activities and sustainable production; and contributing valuable off-farm income for the household...And yet, women face many barriers to participation.”

Training

A shift in best practice will require retraining and on-going education. [NESC says](#) that “lifelong learning, training and education...must be the priority.” Bord na Móna workers who have been retrained to work in peatland habitat restoration and [retrofitting homes](#) are an example of this shift. Skill hubs and training resources will be essential in moving Ireland’s agri-food system toward carbon neutrality in a fair manner.

Diversifying the rural economy

[National Organic Training Skillnet \(NOTS\)](#) is an example of a training hub, and a “not-for-profit network” providing “high-quality, low-cost training for the expanding organic sector throughout the Republic of Ireland.” [A new MSc](#) in Organic & Biological Agriculture, developed and funded by NOTS and Waterford IT, shows the growing demand for this type of agriculture. The manager of NOTS, Sean McGloin, is quoted as saying that they noticed an increased demand in “specific areas including soil biology and

health, more integrated approaches to livestock management and the strategic use of agro-forestry to enhance on-farm biodiversity.” Courses such as the MSc in AgInnovation at NUI Galway and a Post-graduate Diploma in Innovative and Sustainable Agriculture at Munster Technological University also show the growth in new approaches. These complement the extensive education offerings from Teagasc and the agricultural colleges.



Farm walk with Mimi Crawford showing off the regenerative chicken tractor at Crawford’s Farm, CloughJordan. Photo © Oliver Moore

The ‘[Towards..](#)’ report calls (p41) on the Irish government to “identify the grants, training and advisory supports required for a just transition”. [National Just Transition Funding](#) that was awarded in 2020 has directed financial supports toward rural education, training and upskilling projects. Co-operatives are also an important resource for farmers sharing information.

Farm Walks are a great opportunity for knowledge sharing, and showing what is possible when it comes to diversifying farming practices. [Organic Growers Ireland](#), [Teagasc](#), and [Farming For Nature](#) host these events across the country. Farm walks promote community-building, networking, and discussion, all of which are important for farmers when it comes to upskilling and diversifying.

Question: How can we broaden access to upskilling and training? Webinars will only ever reach people who are seeking out information, and who are computer-literate. For farmers who are not in this position, how can information and training be made more widespread and accessible?

Good quality employment

Signatories to the [Paris Agreement \(2015\)](#) agreed to “taking into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities.” Sinead Mercier, planning and environmental law lecturer in UCD, [suggests \(p116\) that](#) “good-quality employment in fossil fuels acts as a draw to people in regions otherwise beset by difficulties,” in reference to a transition away from fossil fuel in Scotland.

For Mercier, “a transition approach that focuses on securing and creating decent work and quality jobs as we move to a low-carbon economy” is an essential part of a just transition.

Community

Ensuring community buy-in for diversification is essential. In relation to a just transition, [Sinead Mercier notes](#) (p11) that “badly handled restructurings of regional economies can leave a community in decline and distrustful of new attempts at restructuring.” According to the [capabilities approach proposed by TASC](#) (p19), it is essential to support local communities and households in identifying local opportunities and needs when it comes to diversification. Teagasc’s [Dr. David Meredith also notes](#) that, “communities and public or private institutions play critical roles in fostering and supporting entrepreneurship.”

Infrastructure & investment

Providing infrastructure that supports diversification is essential to fostering entrepreneurship and diversification. This type of infrastructure includes local processing facilities, [machinery co-ops](#) and tool libraries, high speed broadband, and sustainable rural transport networks. [Social Justice Ireland underlines](#) the importance of expediting “investment in infrastructure in the regions and rural areas” to ensure that “rural economies can diversify and adapt to support thriving rural communities.” Sinead Mercier agrees that “state investment in supportive alternative infrastructure is a key driver of a positive transition.”

Question: What type of infrastructure is needed to foster positive, climate-smart farm and rural diversification? What type of infrastructure is possible and desirable?

Below, to conclude this section, we offer perspectives on rural diversification from a range of stakeholders.

Long-term land-use planning to meet our carbon targets

By Dr. David Styles, University of Limerick

This contribution is based on insight from greenhouse gas (GHG) – land balance modelling for the [EPA-funded SeQUeSTER project](#). Modelling work in that project specifically looked at agriculture forestry and other land use (AFOLU) combinations that could achieve a net zero balance in GHG emissions by 2050, using a backcasting approach. In light of ongoing debate on methane, we treat methane separately and note that large reductions in emissions of this gas, of circa 30 to 80%, are likely to be needed long term to comply with principles of fairness in [nationally determined contributions](#) towards climate stabilisation. But leaving methane aside, there remains a huge challenge to achieve a net zero balance across nitrous oxide (N₂O) and carbon dioxide (CO₂) emissions. We note some key points in relation to CO₂ and N₂O below:

- There is potential to significantly reduce N₂O through reduced use of synthetic N fertilisers and a switch towards protected urea fertilisers, where needed. Grass-clover swards have considerable potential to drive down fertiliser use. Nonetheless, it will be difficult to reduce these emissions more than 50% long term owing to inherently leaky livestock manure management cycles.
 - Forestry is the primary, scalable CO₂ removal measure in the near term for Ireland – and will therefore be required to offset any residual AFOLU (& other sector) emissions in order to achieve climate neutrality.
 - AFOLU climate neutrality is likely to require sustained average afforestation rates somewhere between 13 and 33 kilohectares (Kha) per year, depending on the level of ambition in mitigation of AFOLU emission sources.
 - While forest planting needs to start asap, such planting will not contribute much towards the 2021-2030 carbon budget in the Climate Action & Low Carbon Development Act. A long-term (2050+) policy vision is needed.
- Harvested wood product (HWP) carbon storage, future bioenergy carbon capture and storage (BECCS) and product substitution from cascading wood value chains could more than double net GHG mitigation compared with terrestrial carbon storage alone over a 100-yr period of two commercial forest rotations ([Forster et al, 2021](#)). Scaling out commercial forestry could therefore support long-term climate neutrality across the wider Irish economy, generating significant new (bio)economic activities and employment. Establishing new semi-natural forest will also be important to deliver wider ecosystem services, so that a mixed commercial/semi-natural forestry strategy is vital.
- To achieve climate neutrality whilst maintaining significant milk and beef production, at least 0.5 million hectares of land will need to be forested by 2050, bringing Ireland's forest cover to around 18% (EU average >40%).
 - 300+ Kha of drained organic soils and bogs will need to be rewetted to halt, as far as possible, almost 10 Mt CO₂e emitted annually from organic soil and bog drainage.
 - The bioeconomy may require production of other feedstocks for bioenergy and biomaterials, whilst resilient and sustainable food production may favour a step back from excessive specialisation that leaves the AFOLU sector vulnerable to climate and market volatility.
 - Thus, climate neutrality is likely to require somewhere in the region of one million hectares of land use diversification over the next 30 years. This could involve valuable carbon sequestration, biomaterial and bioenergy production displacing marginal livestock production, with co-benefits for ammonia emissions, water quality and biodiversity – in addition to creating new jobs and processing industries.
 - Irish farmers are in an excellent position to benefit from emerging markets for carbon sequestration and bioeconomy feedstock production owing to internationally high rates of biomass productivity (grass, trees, some crops).

Long-term land-use planning to meet our carbon targets

Realising potential benefits requires proactive government guidance and support, including strategic coordination and long-term vision. This may include, inter alia, a clear bio-industry strategy and seed investment to ramp up e.g. advanced wood processing for greater use in indigenous construction (to demonstrate future demand for wood from current afforestation). Meanwhile, there is a strong case to streamline forest licensing and increase subsidy support on the basis that, without very considerable ramp up in afforestation rates nationally, Ireland is likely to be liable for huge carbon credit costs (possibly hundreds of euros per tonne of CO₂, equating to hundreds of millions and possibly billions of euros annually) to compensate for gross overshoot of climate targets – or alternatively, very dramatic “emergency” cuts in livestock production to avoid such costs. It is already getting late to establish carbon sinks to deliver on 2050 targets in a planned manner. Proactive planning for long-term land use transitions could mitigate risk and leverage considerable opportunities.

Dr. David Styles is associated professor in agri-sustainability at NUI Galway who specialises in environmental foot-printing and techno-economic assessment of agri-food systems.

Innovation for just transition and farm diversification

By Dr. Terry McFadden

Irish farming is in crisis environmentally and economically. It is experiencing unprecedented social change. When Ireland joined the European Economic Community in 1973, there were approximately 250,000 farmers. By 2016, the number of farmers declined to 137,500. Teagasc, however, reports that on average, farm incomes increased by 20% to year 2021, indicating that despite declining farm numbers, income streams appear up. Yet, many farm households clearly are compelled to make long-term changes to their farming practices just to survive.

There is a sustained environmental policy emphasis on innovation and rural diversification to address the ills of Ireland's rural 'economy'. The belief is that innovation along with farm-diversification bolsters growth sustainably. Not only is innovation essential to expand existing product and service lines but it is considered necessary to the sustainability of any business altering course, diversifying, or improving the quality of an existing good or service.

[Richards & Bulkley \(2007\)](#) identified that innovation and diversification had long been considered key to US farming's success, yet innovation's processes remained inadequately understood. They stated that, "The title of entrepreneur is frequently applied to business operators in the non-farm environment, but... is seldom used in the American agricultural business world," adding, "There has been relatively little scholarly research on agricultural entrepreneurs." (p5)

In our research, we emphasised that innovation was critical for the development of European farming, but had consequences in terms of society's changing roles for (diversifying) farm households, their capacity to develop new skills, and for the supporting structures of governance. We examined innovation and diversification separately, observing definitional problems including differences in and between farm-households and rural territories. Innovation was intrinsically bound up with ideas of territory, place and identity.

Focused in Offaly and Mayo to encompass the broadest representative range of farm-household business-profiles as possible, I collected raw data on farms and in development agencies and extension services in order to better understand innovation at the farm-household/policy interface. While innovation could appear 'natural' in some households, it was totally 'alien' in others.

One of the main challenges policy-makers faced was a lack of qualitative research on institutional and policy actor effectiveness. Focused on addressing this research deficit, deficits in the CAP and rural development emerged which were identified/examined, and were assumed to deliver farm-business sustainability.

I found that in order for policy to be effective, the characteristics of households had to be compatible with the businesses' characteristics. Innovation could never be assumed, and policy, however well-tailored economically, was never guaranteed to engender innovation without likewise supporting social life.

Some policy initiatives, primarily the productivist logics of the CAP, hindered innovation by juxtaposing community-led initiatives, such as non-traditional on-farm food and wedding businesses in Offaly and accommodation in Mayo, supported by LEADER. Some policies – forestry in particular – blocked some farmers' innovative orientations and undermined social networking, yet in other geographies appeared to bolster innovation and rural-diversification.

In order to achieve the environmental benefits which innovation can deliver within a 'just transition', there is a need for researchers and policy-makers at farm and non-farming levels to put heads together and problem-solve. Innovation needs to be better understood environmentally. The first step is to extend from a 'should' to a practical 'how' solutions-based focus.

Dr. Terry Mc Fadden is a doctor of human geography and trained cultural anthropological field researcher, specialising in rural development in socio-economic/cultural context.

Diversifying for trees & woodlands on Irish farms

By Ray Ó Foghlú, Hometree

Agroforestry

Agroforestry (aka silvopasture, aka silvoarable) is essentially just trees integrated into food production systems. This can have benefits for production (forage, shelter, soil improvement, extended grazing season, nutrient cycling), for the farm's income (timber, firewood, woodchip, state grants & premiums), and for the environment (water quality, carbon, biodiversity).

Currently in Ireland, uptake is very low, with between 20 and 70 sites planted or in licence. In my opinion poor uptake is a result of a poorly designed scheme and ineffective communication. Farmers are generally unaware of it and those who are aware can't see where it would benefit them.

The current scheme is too rigid. It's totally focused on timber production. It has a very limited range of species and is restrictive in terms of design composition. For these reasons it is currently only suitable for a small number of sites and soil types. We need a more flexible model that acknowledges the multi-functional benefits of integrating trees into production systems. We also need a scheme that is fit-for-purpose and realistic.

Trees can benefit food production, but they can also compete for sun, water and nutrients. They are vulnerable to grazing animals. Cattle break young saplings (even when given three fence posts worth of protection). Without protective mesh at the tree base, sheep can damage even mature (30 years plus) trees in agroforestry plots. These challenges can be overcome, but there are limits. For these reasons I don't see mass adoption of agroforestry, especially on intensive farms, but there remains lots of useful applications. For example poultry and contract rearing of calves.

For me the best approach is new hedgerows and linear woodlands, shelterbelts, windrows, riparian planting and one-off trees in pasture. There is a huge vacuum of knowledge on the topic of agroforestry on the part of farmers and advisers, and even foresters. Any new package will need to address this communication deficit. It will also need more flexibility and a longer premium payment period. A key strength of agroforestry at a practical level is that it overcomes the fear of land and livelihood displacement, by allowing farmers to continue farming, albeit in a slightly different way.

Forestry

Forestry offers great opportunities for rural diversification. It's a genuine alternative and/or accompaniment to farming. It has proven itself to be viable at farm level, although in previous unsustainable iterations, less so at community and environmental levels.

There is a place for native woodlands on every farm, but biophysical production limitations and current native woodland policy give landowners no logical financial reason to opt for native woodland. It simply doesn't make financial sense.

Irish native woodlands have limited production utility, especially those situated on poor soil or in exposed locations. For scenarios where native woodlands can be productive, timeframe is also a major obstacle. The current Native Woodland Scheme (NWS) has a payment period too short to compensate for the permanent land use change, the dramatic devaluing of land and the lack of a substitute income.

Diversifying for trees & woodlands on Irish farms

New policy can address these issues in two ways. In regard to the NWS we need to fill the gap in earning potential between the native and productive forestry schemes with payments for ecosystem services. This will attract more interest, however it won't address the inability of farmers to engage with the woodland as a farm enterprise.

This leads me to the second suggestion for farm woodlands: sensible productive forestry. Alongside

an improved native woodland scheme, we need a forestry scheme that appeals to a farmer's entrepreneurial instincts — that is to say, a scheme which produces a marketable output within the farmer's lifetime. This necessitates the inclusion of productive conifers. When I say sensible, this applies to where they are planted, what species they are composed of and how they are managed.



The Glengarriff Valley in County Cork, which has a mix of old oak woodlands, new regenerating native woods, and productive forestry. Photo © Lenny Antonelli

Diversifying for trees & woodlands on Irish farms

Non-financial corporate accounting

In future, not all the potential payments for ecosystem services will come from state or EU subsidies. Private and corporate capital will be increasingly relevant. Non-financial corporate accounting (environmental-social-governance, or ESG) will soon see SME and multinationals looking for biodiversity and carbon credits. Businesses and corporations will need to satisfy certain regulatory standards (compulsory and voluntary) around impacts on the environment. To meet these standards, they will make payments in return for “credits”. These are delivered by landowners and overseen/audited by a third party according to various codes of practise. I believe this concept will see huge growth.

Farm woodlands & the Illaun Farm-Forest EIP

Genuine farm level engagement will be the key to allow the necessary changes to occur. We have to acknowledge a very deep scepticism of change from grass-based agriculture. Forestry as an alternative is particularly badly tarnished. It will need proper allocation of time and resources to address this, and allow farmers to step comfortably into a new venture.

Woodland creation, especially at scale, is a sensitive issue in rural Ireland, presenting serious social, cultural, and economic difficulties. In the hope of demonstrating an alternative approach, Hometree created the Illaun Farm-Forest EIP, a project which we hope acknowledges the identity, concerns, and aspirations of rural Ireland, as well as the perilous state of its biodiversity.

The starting point for our project was a network of little-known sessile oak woods clinging on in river valleys near Miltown Malbay, Clare. In 2021 we sought funding from the Department of Agriculture, Food, and the Marine to work in partnership with local farmers, to increase the size, quality and connectivity of these woodlands.

Our EIP is now up and running and fully subscribed. We are delighted to be working with a fantastic group of farmers. The first step for each is a visit from our forester-ecologist team. We walk the farm, share ideas and create a plan to integrate native woodlands in ways that are useful for biodiversity and also useful to the farmers. We wish to counter the common perception of forestry as a land-use that displaces farming and instead, present it as a complementary land use. On the ground this takes the form of shelterbelts, windbreaks or riparian woodlands. Once established, these trees will provide shelter for livestock, intercept polluting nutrients and sediments from entering watercourses, and increase on-farm habitat, as well as providing connectivity at a landscape level. For larger areas our forester works closely with the farmer to make a Native Woodland Scheme application, which will generate a new income stream.

Thinking big

We imagine a future landscape of significant wild spaces interspersed with vibrant farming communities. The large ‘core’ areas can be composed of semi-state land (Bord na Móna and Coillte) supplemented with new and expanded national parks acquired through non-compulsory state purchase. For the farmland between, we believe small locally adapted programmes such as our own, schemes which are sensitive to landscape and culture, can integrate nature in the form of native woodlands, wildflower meadows, or active bogs. The efficacy of such programs has been demonstrated by programmes like Burren Life and the Bride Project. A common feature of which is that they are delivered within the community, often by the community, in response to issues known best to the community. Blunt top-down policies have failed. Maybe in this time of crisis, the only way to go big is to think small.

Ray Ó Foghlú is the landowner engagement coordinator at Hometree, a land charity based in County Clare. The Illaun Farm-Forest EIP is funded by the Department of Agriculture, Food and the Marine.

Conclusion

This report aimed to examine the potential role for diversification in delivering a just transition for rural Ireland, with a particular focus on farming. The intention has been to initiate a conversation between stakeholders around possible next steps for a just transition for Ireland's agri-food sector.

After two years of coping with Covid-19, we now have a war in Ukraine that has displaced people and disrupted food supplies, alongside a global climate and biodiversity crisis. We stand at a crossroads. Rather than carrying on with business as usual, now is the time to examine how our landscapes are coping with intensified food production methods, and to assess how our rural towns, villages and communities are faring.

In Dr. David Styles's Teagasc [Signpost Series webinar](#), the researcher lists a number of 'ingredients' that will help move Ireland toward climate neutrality, but says that, "stakeholders need to determine the exact recipe". He says that we urgently need a vision or visions for the future of the land use sector, as there will likely not be one single agreed upon idea of how to reach our carbon neutrality targets.

GHG emission deadlines are looming, Ireland's biodiversity crisis is at a [critical point](#), while [water quality is declining](#). Action is urgently needed. It is critical that we are inclusive, ambitious and brave when taking the next steps for our agri-food sector and rural communities. Reviving rural communities to become places where people can live, work, and play will be an essential part of a just transition. Supporting farmers in the essential work of producing food, creating rural employment opportunities, and providing public goods will be integral, too. Continuing to engage with and listen to one another, will be essential when figuring out the exact "recipe" for achieving the [Climate Action Plan](#)'s vision for a "climate resilient, biodiversity rich and carbon neutral" Ireland.

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