



Risk issues within the Agricultural sector on the island of Ireland:

mapping for a sectoral
Just Transition

NERI Report Series, No.15

Aoife Murphy



**Lowering emissions will
prove to be a significant
challenge for the
agricultural sector,**

Summary

Despite its disproportionate contribution to overall emissions, the agricultural sector in both jurisdictions on the island of Ireland has seldom been the focus of Just Transition efforts. The Just Transition framework involves approaching the shift to a low carbon economy and sustainable production through a trade unionist lens. The focus of the framework is to ensure the security of livelihoods, while also implementing worker's rights and social rights, as the various sectors of the economy are challenged to reduce emissions, protect biodiversity, and combat climate change.

Lowering emissions will prove to be a significant challenge for the agricultural sector, both in the Republic of Ireland (ROI) and Northern Ireland (NI), not to mention doing so in a manner that would bring equality and opportunity to its workers. Using Eurostat data, this report examines the characteristics of employed persons within the agricultural sector that may make it difficult for them to adapt to needed reforms. These same characteristics may also leave workers vulnerable to labour market transitions if, unfortunately, jobs are lost during the greening of the economy.

Eurostat data suggests that employed persons within the sector are currently experiencing unsustainable working conditions. Recognising the realities of day-to-day farming life and including workers in policy changes surrounding emissions will be key to successfully implementing a Just Transition within the agricultural sector. Failing to do so could prove to bring political difficulty and exacerbate existing inequalities, hindering the change that has already been so slow to come.

Introduction

Between 2009 and 2019, the ROI's agricultural sector consistently emitted over three times more greenhouse gases (GHGs), as a proportion of aggregate emissions, than the average European Union (EU) agricultural sector. In 2019, for example, 32.4 per cent of the country's total GHG emissions came from the agricultural sector. Across the EU, 10.3 per cent of emissions came from agriculture. Similarly, Northern Ireland's agricultural sector accounts for a large portion of total emissions, [contributing 27 per cent of total greenhouse gases in 2018](#).

Furthermore, the ROI is an outlier when it comes to the proportion of greenhouse gas emissions attributable to methane from agricultural practices in the EU. In 2019, the ROI's methane emissions were as high as 93.2 per cent of the sectoral total, which is 10 per cent more than the second highest methane emitter, Switzerland, which had rates of 83.2 per cent. This is significant given that [methane holds between 27.2 and 29.8 times as much heat as the same quantity of carbon dioxide over a 100-year period](#).

Just as the sector is significant in terms of its emissions in both jurisdictions on the island of Ireland, the agricultural sector is also significant in terms of value added and employment relative to comparable EU states. Value added indicates the degree to which an item's worth or value increases at each phase of its development, excluding initial expenses. While the agricultural sector is relatively small in economic terms across Ireland, table 1 shows the significance of agricultural contributions to the proportion of total value added in the ROI and NI in comparison to the peer average in 2019.

That year, agricultural contributions to value added were particularly notable in Northern Ireland with 1.7 per cent of the total value added being attributable to the sector. Agriculture in the ROI contributed less than this, with the sector making up 1.2 per cent of the proportion of total value added, however, this is still above the peer average of 0.9 per cent.

Similarly, in employment terms, NI's agricultural sector comprised a significant proportion of the total employment of the economy with 7.7 per cent of the total labour force working in the sector. Employment in the ROI is also quite dependent on agriculture as the sector made up a proportion of 4.4 per cent of the total workforce. Once again, although this is less significant than the rate of employment in agriculture in NI, it is still comparatively higher than the peer average rate of 1.8 per cent.

Table 1 Agricultural contributions to Value Added, Employment and Emissions 2019

Agriculture as a proportion of total	Republic of Ireland	Northern Ireland	Peer average
Value Added*	1.2%	1.7%**	0.9%
Employment	4.4%	7.7%	1.8%
Emissions	32.4%	26.12%	10.3%

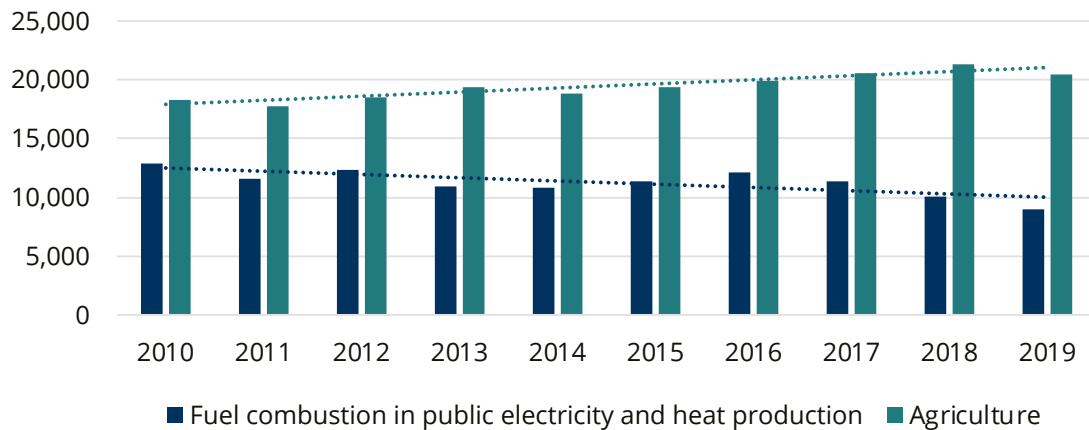
Sources: Air emissions accounts totals bridging to emission inventory totals (Eurostat, 2021), Northern Ireland greenhouse gas inventory 1990 – 2019 statistical bulletin (NISRA, 2021), Regional gross value added (balanced) by industry: all IRL regions (ONS, 2021), Employment by sex, age, economic activity and NUTS 2 regions, Non-financial transactions (Eurostat, 2021), National accounts aggregates by industry (up to NACE A*64) (Eurostat, 2021)

Note: Peer average refers to a group of comparable wealthy EU states encompassing Belgium, Denmark, Germany, France, Netherlands, Austria, Finland and Sweden. * To minimise the bias associated with Ireland's tax arrangements, Value added for ROI and the Peer average are net value added over net national income. **NI data are expressed as gross value added over total regional value added.

Comparing agricultural emissions trends to those of other major emitting sectors shows that agriculture in the ROI is falling behind in terms of reductions. For example, figure 1 shows that despite the public heating and electricity production sector having lower emissions than the agricultural sector at the start of the last decade, its emissions steadily declined from 12,895.1 thousand tonnes in 2010 to 8,985.0 in 2019. The agricultural sector's emissions on the other hand continued to rise from 18,348.9 thousand tonnes in 2010 to 20,479.7 in 2019. The decline in public heating and electricity emissions can be attributed to technological changes and policy pressure. For Ireland to meet its targets under international agreements, the Irish agricultural sector will likely need to follow suit and also reduce its GHG emissions. Examples of proposed reform

can already be seen in the newly released Climate Action Plan which has set a [target of a 22-30 per cent reduction in overall emissions by 2030 relative to 2018 levels](#).

Figure 1 Greenhouse gas emissions by source sector – public electricity and heat production vs. agriculture



Sources: Greenhouse gas emissions by source sector (EEA) (Eurostat, 2021).

Stop Climate Chaos (2020) make the argument that, in the case of the ROI, [much of the rising emissions from agriculture over the past decade can be attributed to the removal of policies which had previously succeeded in limiting emissions from the sector](#). For example, since the abolition of the milk quota in 2015, policy has pushed Ireland's dairy industry to intensify. This expansion has contributed largely to methane emissions. McCabe (2019) points out that this has also [led many farming families to take on inter-generational debt to support herd expansion](#).

In order to succeed in the implementation of a Just Transition within the agricultural sector, workers must be acknowledged and included in policy changes. These policy changes must strive to counteract both the issue of rising emissions and the negative impact that current policies have had on the income of farmers and other agricultural workers.

Though this transition may reach both jurisdictions on the island of Ireland at a slower pace than other developed nations due to the economy's dependency on agriculture, preparations must be put in place to ensure that this shift happens in a just manner. According to NESC (2020), [during the green transition, the agri-food sector is anticipated to be among the worst struck industries in employment terms](#), indicating that, not only will changes in agriculture affect jobs within the sector, but it may also negatively influence employment in other sectors of the economy such as food processing, food transport, and other related industries. For that reason, actions towards implementing a Just Transition for the agricultural sector must not be delayed. Ní Lochlainn (2020) makes the argument that ["The first step in planning for a just transition is to identify the segments of the workforce and population which are at risk from the transition to a low-carbon economy"](#). With this in mind, this report aims to identify characteristics of the agricultural labour force which may make workers and farmers vulnerable to the reforms likely to be put in place.

Section 1

The data used throughout the remainder of this report focuses on employed persons in the Republic of Ireland (and Northern Ireland where possible) working within the agricultural, forestry and fisheries sector. The vast majority of workers within this category are involved in agricultural practices. The most recent Eurostat data available shows that in 2016 there were 157,490 employed persons in the ROI's agricultural sector working on a regular basis. In the same year, there were 2,900 employed persons working in forestry and logging. While there is a lack of data available from 2016 stating the number of employed persons working in fisheries, the Annual Review and Outlook for Agriculture, Food and the Marine (2020) states that there were [approximately 16,150 people engaged directly or indirectly in the fishing industry in Ireland in 2020](#). This is still significantly less than the number of agricultural workers.

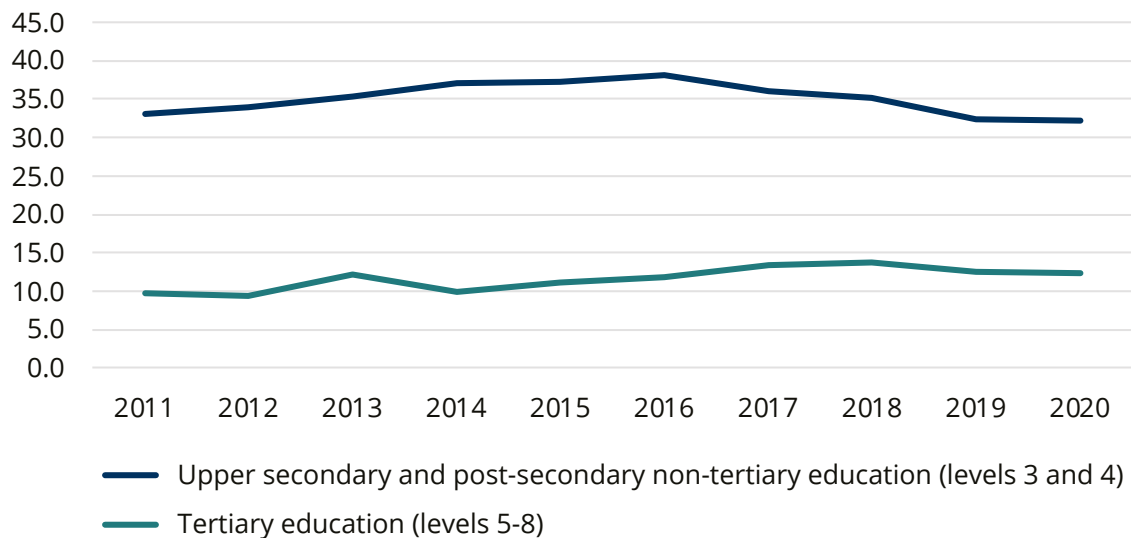
In Northern Ireland, the composition of workers within the agriculture, forestry and fisheries sector is also predominantly made up of agricultural workers. QES data shows that in 2021 Q2 there were approximately 12,800 persons employed in crop and animal production, hunting, and related service activities, allowing the cohort to make up 95.5 per cent of the agriculture, forestry, and fisheries sector in NI. In the same quarter, there were just 310 persons employed in forestry and logging making up 2.3 per cent of the sector and 290 employed in fishing and aquaculture making up the remaining 2.2 per cent of total persons employed in agriculture, forestry, and fisheries. In short, where there is mention of the agricultural, forestry, and fisheries sector in the following paragraphs, it can still be inferred that the figures are mostly representative of agricultural workers.

[Education and training activities are an important element of Just Transition processes](#), both in terms of having the skills and knowledge to lower emissions, and in ensuring that the newly green work is of a fair and decent quality. In the agricultural sector, [a change in the type of labour carried out, along with the kind of equipment and technology used in the response to climate change, would include a necessary increase in knowledge](#) in issues around land diversification, solar panelling, and precision farming techniques for example. An analysis of current education and training rates within the agricultural sector is therefore a useful step in identifying possible issues.

Figure 2 shows the number of employed persons within the agriculture, forestry, and fisheries sector in the ROI who have an upper secondary non-tertiary level of education and the number of those with a tertiary level of education over the past decade. Looking more specifically at the last five years, the steady decrease in the number of workers within the sector who have an upper-secondary non-tertiary level of education becomes clear. Numbers fell from 38.2 thousand in 2016 to 32.2 thousand in 2020. Though there has been fluctuation, there has been a marginal increase during this time in the number of workers with a tertiary level of education within the sector as figures rose from approximately 11.8 thousand in 2016 to 12.4 thousand in 2020. The decline of upper second level educated workers and the slight increase in tertiary educated workers

within the sector can be largely attributed to the continuously decreasing number of employed persons in agriculture, forestry, and fisheries. This is not to say, however, that the rate of higher educational attainment among workers within this cohort is not worrying.

Figure 2 Educational attainment level within the agriculture, forestry and fisheries sector



Source: Employment by sex, occupation, and educational attainment level (1 000) (Eurostat, 2021)

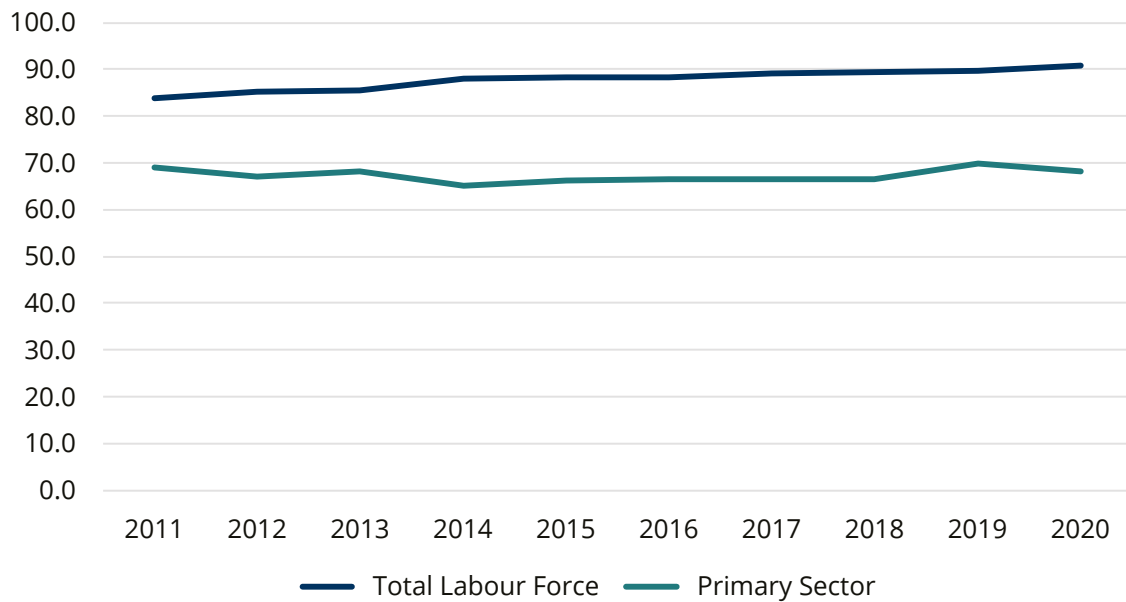
Overall, when compared with the total ROI labour force, the agricultural, forestry, and fisheries sector has a significantly lower rate of workers holding an upper secondary level of education or higher. In 2020, there was a 22.5 percentage point difference between the proportion of employed persons, aged between 15 and 64, with an upper second level of education or higher in the total workforce compared to the proportion of those working in the agricultural, forestry, and fisheries sector. To break this down, 90.7 per cent of the total workforce had attained an upper second level of education or higher in 2020, while just 68.2 per cent of agricultural, forestry, and fisheries workers attained the same.

Furthermore, the rate of employed persons in the total labour force attaining an upper secondary or tertiary level of education has increased over the last decade, rising from 83.7 per cent in 2011 to 90.7 per cent in 2020. Attainment rates within the agricultural, forestry, and fisheries sector, on the other hand, have remained mostly stagnant, peaking in 2019 at 69.8 per cent (less than a 1 per cent increase from 2011), before dropping again in 2020 to 68.2 per cent. This process is represented in figure 3.

The difference in tertiary educational attainment rates between the total labour force and the agriculture, forestry, and fisheries sector is also evident in NI.



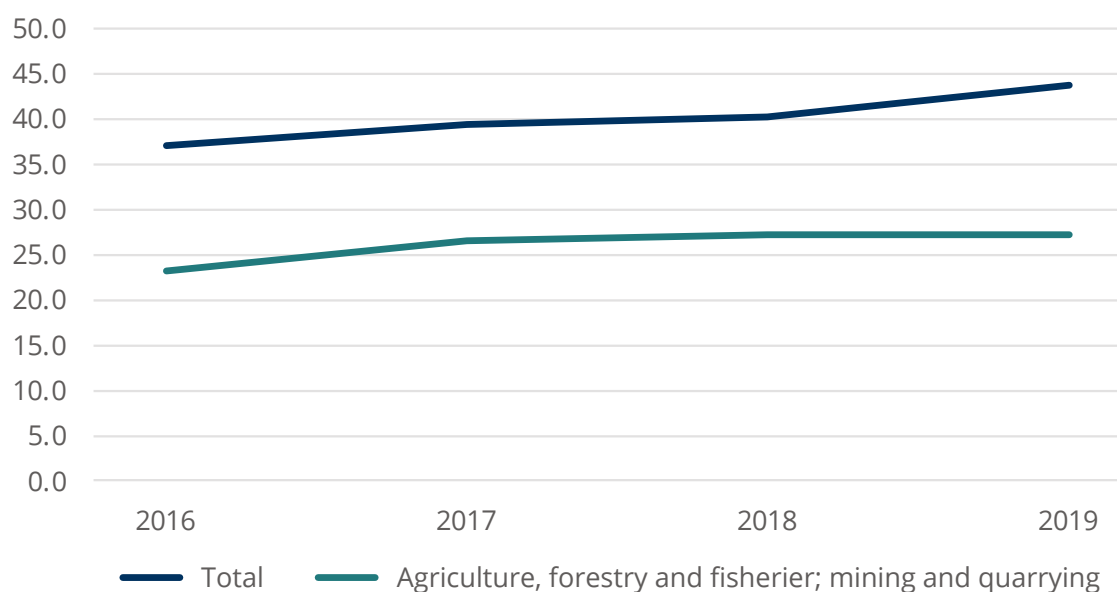
Figure 3 Difference in Educational Attainment between the Total Labor Force and the Agricultural, Forestry, and Fisheries Sector



Source: Employees by educational attainment level, sex, age and occupation (%) (Eurostat, 2021)

The difference in tertiary educational attainment rates between the total labour force and the agriculture, forestry, and fisheries sector is also evident in NI. Figure 4 shows the percentage of workers with a tertiary education within the total labour force compared to the percentage of those employed in agriculture, forestry, fishing, mining, and quarrying (i.e. the primary sector) between 2016 and 2019.

In 2019, there was a 16.6 percentage point difference between the proportion of employed persons in the total workforce with a tertiary education and the proportion of those in the primary sector, with 43.8 per cent of the total workforce having attained a tertiary education compared to 27.2 per cent of the primary sector. Unlike the stagnation seen in the ROI, the number of agricultural, forestry, and fisheries workers with a tertiary education in NI is on the rise with rates increasing from 23.3 per cent in 2016 to 27.2 per cent in 2019. The increase in employed persons with a tertiary education is happening at a faster rate however within the total workforce as rates jumped from 37.1 per cent in 2016 to 43.8 per cent in 2019. As a result, the widening gap in attainment rates between the total labour force and the agriculture, forestry, and fisheries sector depicted in graphs representing the ROI can also be seen in graphs representing NI.

Figure 4 Tertiary education in Northern Ireland total workforce vs. primary sector

Sources: Employment in technology and knowledge-intensive sectors by NUTS 1 regions and level of education (from 2008 onwards, NACE Rev. 2) (Eurostat, 2021).

Eurostat data shows that, across all sectors in the ROI, participation in non-formal, job-related education and training increased from 19.5 per cent 2011 to 56.4 per cent in 2016. When participation rates are divided into various degrees of urbanisation, however, rural areas (that are naturally representative of the majority of agricultural workers) score the lowest. 2016 engagement rates for job-related education sat at 40.5 per cent of employed persons in rural areas, compared to 48.6 per cent of employed persons in cities.

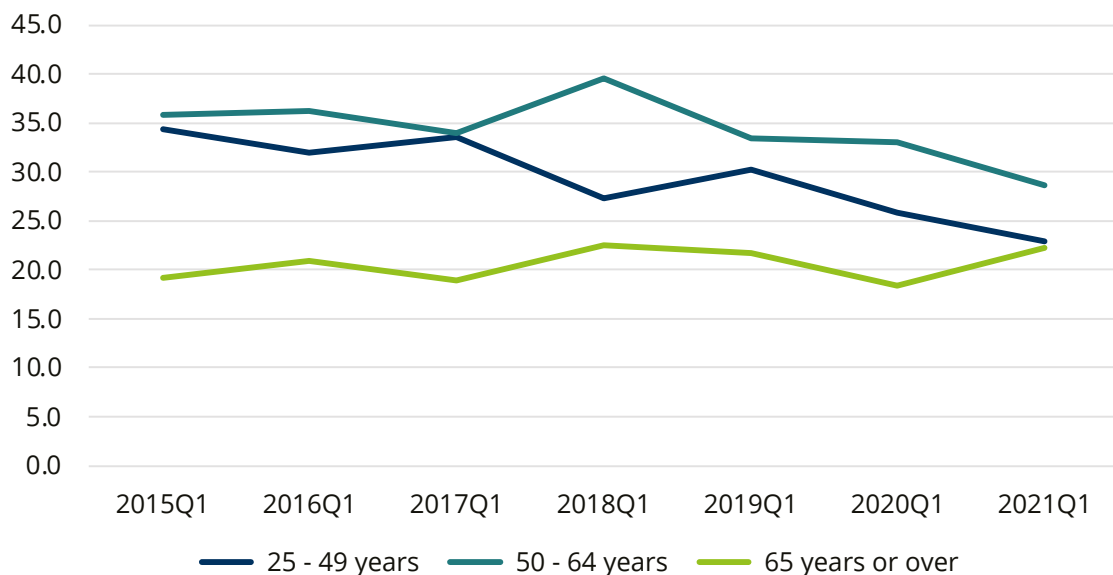
That same year, agriculture, forestry, fisheries and veterinary made up 2.2 per cent of the total distribution of persons engaging in non-formal job-related education and training activities. [Using the SOC2010 classification which included 328 separate occupational categories, the CSO found that at the time of the most recent census in 2016, farmers were the second largest occupational group representing 3.5 per cent of the total workforce.](#) Given the large number of workers within the cohort, the sector should have made up much more than just 2.2 per cent of the total distribution of persons engaging in job-related education. If Ireland is to meet its emissions reduction targets in agriculture, the introduction of new skillsets and knowledge ([much of which can be achieved with on-the-job training](#)) will play a crucial role in the process. Policy must therefore promote and incentivise the training and education of farmers where possible.

The ageing population of the agricultural sector may however hinder on-the-job training. According to Fang, Gunderson and Lee (2021), [older workers are less likely to receive training than younger workers due to the belief that the cost of training is higher for older workers. The older age of many of the agricultural workers may also make engaging in training more difficult as it has been a number of years since many of the workers have last been in formal education.](#)

Section 2

One of the standout characteristics of the agricultural labour force is its ageing population. According to the National Farm Survey (2020), [the average age of farmers in the ROI is currently 59. Dairy farmers are the youngest cohort, typically aged 55, while cattle other farmers are the oldest cohort averaging at 62 years of age](#). Using Eurostat data, figure 5 looks at the number of agricultural, forestry, and fishery workers in the ROI between 2015-2021 in three separate age categories. These are; 25-49, 50-65, and 65 years and over. The 50-65 age category has the highest number of employed persons. This is followed by the 25-49 age category. Both categories have seen a continuous decrease in the number of employed persons in recent years. This is particularly the case for the 25-49 cohort which has seen a decrease of approximately 11,400 employed persons between 2015Q1 and 2021Q1. The age category 65 years and over, however, has seen a steady increase in the number of employed persons with figures reaching approximately 22,300 in 2021 Q1. In 2021 Q2, these numbers rose again to 26,400, effectively equalling the cohort in size to the 25-49 year-old age group which was comprised of approximately 26,100 workers at the time. Furthermore, the number of employed persons in the sector over the age of 75 has been steadily increasing since 2007 with approximately 6,700 people aged 75 or over working in 2021Q2.

Figure 5 Age range per thousand workers in agriculture, forestry, and fisheries sector



Source: Employment by sex, age, professional status and occupation (1 000) (Eurostat, 2021)

There are many studies showing high levels of discrimination towards older persons in the labour market. For example, Flek, Hála, and Mysíková (2020) found [that older people living in Austria, Poland, the Czech Republic and Slovakia had a job-finding probability which was 20–25 per cent lower than that of younger workers with the same level of](#)

[qualifications](#). For this reason, it is essential that job-loss is mitigated during the greening of the sector. Furthermore, agriculture's aging population may negatively influence the development of the sector and rural areas. One reason for the consistently increasing numbers of employed person continuing to work in the sector past retirement age is the lack of a substantial pension. Research conducted in Maynooth University in 2019 found that [62% of farmers over the age 65 in the ROI do not have private pension. This can be attributed in part to low annual incomes and leaves many farmers with no option but to continue working in a labour-intensive occupation throughout their older years, liquidate their farm assets, and/or become dependent on the state pension to avoid sinking below the poverty line.](#)

The steep decline in the number of younger agricultural, forestry, and fisheries workers is also worrying. From an environmental perspective, [younger farmers tend to adopt sustainable practices and participate in agri-environmental schemes more than older generations](#). This is key to the decarbonisation of the sector. Policymakers must therefore strive to make it a more attractive industry for the younger generation. While surveying and interviewing Irish farmers Das V., Sharma, and Kaushik (2019) found that [while some farmers think that technology will interest the next generation to participate in agriculture, many feel that comes down to whether or not they can receive a financially sustainable income](#). The issue of income is therefore an important factor to take into consideration when creating policies in the hopes of promoting change within the sector.

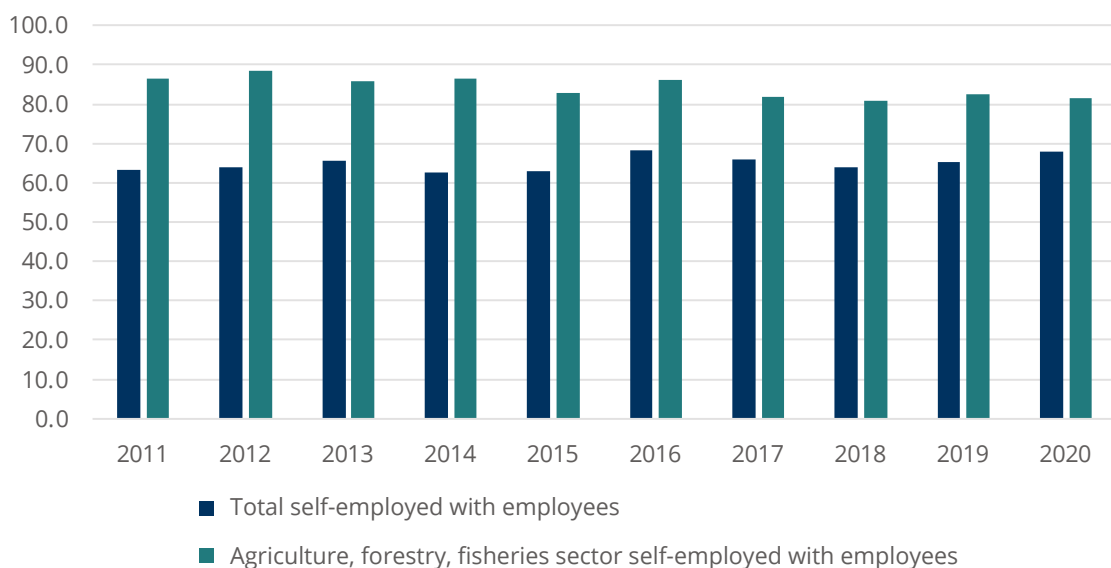
High job-tenure rates within the ROI's agricultural, forestry, and fisheries sector further indicate the lack of young people joining the agricultural workforce, as an overwhelming majority of workers within the sector first acquired their position over a decade ago. Job tenure refers to the length of time that workers have been employed in their current position or job. Figure 6 shows the rate of self-employed persons with employees that have worked in the same occupation for 10 years or more in the agricultural, forestry, and fisheries sector and the rate of those in the total workforce between 2011 and 2020. The agricultural, forestry, and fisheries sector has consistently seen higher rates than the total labour force in terms of the percentage of people who first started their current job over ten years ago. For example, in 2020 67.9 per cent of self-employed persons with employees (aged 25 years or over) across the total labour force had remained in their job for 10 years or more. This number was as high as 81.6 per cent in the agricultural, forestry, and fisheries sector.

In comparison with the average EU worker employed in this sector, the ROI again shows higher rates. In 2020, 81.1 per cent of all self-employed persons working in agriculture, forestry and fisheries in Ireland had been working in the same job for 10 years or more while the average rate across the EU for that cohort was 75.8 per cent. The data chosen here focuses on self-employed persons as opposed to employees as the majority of agricultural workers and farmers in the ROI are self-employed. For example, [in 2017 Q1, of the 107.7 thousand persons employed in agriculture, forestry, and fisheries, 77.4 thousand of those were self-employed](#) according to NESC. Looking at the rate of

self-employed persons within the sector who first acquired their position less than 10 years ago shows the lack of succession in family farms in Ireland. Eurostat data shows that in 2018 just 5.3 per cent of self-employed persons without employees (i.e., own account workers) had acquired their position in the past 5 to 9 years. In that same year, just 4.2 per cent of own account workers in the sector had acquired their position in the past 1 to 4 years.

Macra na Feirme (2013) made the argument that [a lack of land mobility can hinder younger farmers from successfully taking over farm work and assets while also effecting farm development](#). Worryingly, ifac's (2021) Irish Farm Report detailed that [71 per cent of farmers have not identified a successor to the farm. A third of those explained that this is because it is not viable for the next generation to take over](#). Although creating an attractive environment for younger farmers is important, issues around land mobility and the financial sustainability of farming must also be tackled if the imbalance of age within the agricultural, forestry and fisheries sector is to be resolved and if a smooth transition towards a greener sector is to be achieved.

Figure 6 10 + years Job Tenure in Self-employed with Employees by Total Workforce and Agriculture, Forestry, Fisheries Sector



Job tenure by sex, age, professional status and occupation (Eurostat, 2021)

Section 3

This section will examine evidence demonstrating relatively poor working conditions within the sector. The rate of agricultural, forestry and fisheries workers between the ages of 20 and 64 engaging in extreme weekly working hours is very high in comparison to all other labour force sectors in the ROI. In 2020, 1.4 per cent of the total workforce worked 70 hours or more on a weekly basis. In contrast, 22.6 per cent of agricultural, forestry, and fisheries sector workers worked 70 hours or more weekly. Of the nine ISCO-08 categories, agriculture, forestry, and fisheries is the category with the highest rate of employed persons participating in such hours, managers being the category with the second highest rate standing at 3.2 per cent in 2020. Furthermore, figure 7 shows that while long working hours seem to be decreasing for the average EU worker within this sector, they are quickly increasing in the Irish case.

Figure 7 Rate of employed persons working 70+ hours weekly in agriculture, forestry, and fisheries



Source: Weekly working hours by sex, age, professional status, and occupation (Eurostat, 2021).

The rate of employed persons participating in other above average brackets of weekly working hours is on the rise for the total Irish labour force, however, these increases are not happening as rapidly as they are in the agricultural, forestry, and fisheries sector. For example, the rate of employed persons in the total labour force typically engaging in 50 to 59 hours of work weekly increased from 3.9 per cent in 2011 to 5.5 per cent in 2020. In contrast, the rate of employed persons in the agricultural, forestry and fisheries sector jumped from 6.9 per cent in 2011 to 12.5 per cent in 2020. Furthermore, across the sector, the number of self-employed persons between 20 and 64 who typically work on weekends has increased over the last decade. This is particularly the case for self-employed persons with employees as rates jumped from 75.4 per cent in 2011 to 91.9 per cent in 2020.

The extensive working hours farmers are engaging in leaves limited time to engage in education and training as well as other mitigation approaches that are seen as essential to Just Transition efforts. What's more, such working hours are not sustainable for farmers themselves given that it is putting their mental and physical health at risk. Dekker's (2020) qualitative interviews conducted for the Climate Change Advisory Council's Working Paper No.7 found that [many farmers are concerned about the toll that the long working hours are taking on their mental health, with issues of isolation and loneliness becoming prominent within the sector.](#)

In terms of physical health risks, such issues are reflected in the high rate of fatal accidents recorded at work. Seven of the ten years between 2010 and 2019 saw the agricultural, forestry, and fisheries sector account for more than half of the annual total fatal accidents recorded at work. Agriculture specifically represented the largest portion of such accidents. For example, in 2019, of the 20 fatal accidents recorded in the sector, 17 of those were linked with agricultural practices while 3 were linked with fisheries and aquaculture. Forestry accounted for no fatal accidents that year.

Not only are employed persons within the sector faced with bleak working conditions, but many also earn comparatively less in median terms than others in the Irish labour force, particularly considering the physical intensity of much of the labour involved in agriculture. In their assessment on the resilience of farming systems in Europe, Meuwissen et al. (2019) found that [across Europe, farming is consistently marked as a low-income industry with long working hours, limited time for social interactions, and large monetary burdens.](#)

Table 2 shows the extent to which the description of a 'low-income industry' applies to the Irish agricultural sector. It details the median hourly earnings in euro of employed persons working within the total labour force, and the earnings of those in the agricultural, forestry and fisheries sector, between 2002 and 2018 in the ROI. Both the total labour force and the agriculture, forestry, and fisheries sector saw a continuous increase in median hourly earnings between 2002 and 2014. Earnings then dropped in 2018 for both groups. According to the data, agriculture, forestry, and fishery workers consistently earned less than the average worker in Ireland, with employed persons in the total labour force typically earning 17.79 euro per hour in 2018 compared to 13.88 euro per hour for agriculture, forestry, and fisheries workers.

Table 2 Median Hourly Earnings in Euro 2002-2018

SECTOR/TIME	2002	2006	2010	2014	2018
Total	15.36	16.72	18.23	20.16	17.79
Agriculture, Forestry, Fisheries	11.07	12.39	15.07	17.22	13.88

Source: Structure of earnings survey: hourly earnings (Eurostat, 2021).

Additionally, if the transition to a low carbon agricultural sector is to be truly just then it must tackle existing inequalities present within the sector. [All sectors of the Irish economy show high levels of economic inequality](#), however TASC and The Foundation for European Progressive Studies (2018) found that [agriculture is the most unequal sector in Ireland in economic terms](#). This is evident in the data shown in table 3 which shows the average hourly earnings (in euro) of workers in the first and ninth income deciles in the agricultural, forestry, and fisheries sector in the ROI. The hourly earnings for agriculture, forestry, and fishery workers in the first income decile are much in line with the earnings of first income decile workers across the total labour force due to minimum wage. Unfortunately, however, minimum wage does not equal the living wage in the ROI. In 2018 for example agriculture, forestry, and fisheries workers within the first income decile typically earned 10.92 euro per hour. This was above the [minimum wage at the time which stood at 9.55 euro per hour](#) yet remained significantly below [the living wage which was 11.90 per hour](#).

Furthermore, these earnings were significantly lower than the typical hourly earnings of agriculture, forestry, and fisheries sector workers in the ninth income decile who earned 19.04 euro per hour in 2018. This amounted to a difference in earnings of 8.12 euro per hour between first income decile workers and ninth income decile workers within the sector. This was a vast improvement however from the level of income inequality seen in 2014 within the sector which showed a difference in earnings of 24.98 euro per hour between first and ninth income decile workers, with first decile workers earning 10.09 euro per hour and ninth decile workers earning 35.07 euro per hour. Regardless of this improvement, further efforts must be made in order to provide the first income decile with liveable earnings.

Table 3 Agriculture, Forestry and Fisheries First Decile Hourly Earnings and Ninth Decile Hourly Earnings 2002-2018

SECTOR/TIME	2002	2006	2010	2014	2018
First decile	8.00	9.01	9.20	10.09	10.92
Ninth Decile	19.64	:	23.84	35.07	19.04

Source: Structure of earnings survey: hourly earnings (Eurostat, 2021).

Conclusion

Although it is inevitable that the agricultural sector will have to reform in order to reduce emissions in the coming years, justice within that reform is unfortunately dependent on the foresight of policymakers and their understanding of the various intricate realities faced by employed persons within the sector. Through the analyses of Eurostat data, and with reference to the research of others, this report has found that the composition of the agricultural sector in terms of age and education is likely to leave the employed persons accounted for exposed to discrimination in the labour market if job loss is not prevented.

Old age and high job tenure rates associated with workers within the sector may slow down the introduction of greener farming methods. Such issues also indicate a lack of financial security for workers in the sector. Furthermore, data showed an over-working of farmers which not only hinders their ability to engage in climate action, but also puts their physical and mental health at risk. Some barriers to achieving a Just Transition in the agricultural sector have been identified. Policy must now strive to support farmers and other agricultural workers to overcome these barriers and realise a low carbon and fair sector that values its workers. This will be undoubtedly difficult given the wide variety of farming types, sizes, and agricultural land in Ireland, north and south, however, investment into innovation and research in Irish and Northern Irish agriculture has become an absolute necessity.







31/32 Parnell Square, Dublin 1, Ireland

Phone: +353 1 8897722

45-47 Donegall Street, Belfast BT1 2FG, Northern Ireland

Phone: +44 (0)28 9024 6214

info@NERInstitute.net

www.NERInstitute.net

 @NERI_research