

Overview

The land area of Ireland is 6.9 million hectares (2014), of which 4.4m hectares is used for agriculture and a further 0.73 million hectares for forestry. 81% of agricultural area is devoted to pasture, hay and grass silage (3.6 million hectares), 11% to rough grazing (0.5 million hectares) and 8% to crops (including cereals), fruit & horticulture production (0.36 million hectares)¹. The average land price in Ireland in 2015 was estimated to be €8,194 per acre².

Since publication of Ireland's first LULUCF action report, Irelands cereal planting has decreased by 9.5% from 306,700 hectares to 277,600 hectares³. These changes are largely due to yield volatility and fluctuations in the price.

Since the previous report at the end of 2014 on Ireland's LULUCF the area afforested since 1990 has increased from 300,000 ha to 318,000 ha, funded the national Forestry Programme 2014-2020⁴.

The current level of forest cover based on the 2nd National Forest Inventory (NFI) is 10.7%. The 3rd NFI is due for completion in 2017 and this will provide an updated forest cover estimate.

The forest industry continues to grow in Ireland the sector is responsible for approximately 12,000 jobs in the economy. Wood processing in Ireland is export-led: in 2015, exports of forest products were valued at €355 million. Wood based panels (WBP) accounted for €190 million, the balance comprising paper and sawn timber exports⁵.

Section 1

Forests

1.1 Projections

Work to update projections of emissions and removals from forest will begin in 2017 to reflect forest area and composition, up to date roundwood production (harvest) forecasts and relevant renewables and other policies.

¹ <http://www.agriculture.gov.ie/media/migration/publications/2017/FactsheetIrishAgriculture180117.pdf>

² Irish Farmers Journal Land Price Survey 2015

³ http://pdf.cso.ie/www/pdf/20160908085852_Crops_and_Livestock_Survey_June_Provisional_2016_full.pdf

⁴ <http://www.agriculture.gov.ie/media/migration/forestry/forestryprogramme2014-2020/IRELANDForestryProgramme20142020230215.pdf>

⁵ <http://coford.ie/media/coford/content/publications/woodflow2015/WoodflowCCN2015FirstDraft280716.pdf>

For the projections provided in the end of 2014 submission the following trends are likely to impact on the level of emissions and removals over the period to 2030:

- Afforestation

The current projection is 8,000 ha per year. The rate achieved over the 3-year period 2014-2016 is in Table 1. It was on average 1690 ha below the projected rate.

Table 1: Rate of afforestation in Ireland 2014-2016⁶.

| <i>Year</i> | <i>Afforestation ha</i> |
|-------------|-----------------------------|
| 2014 | 6156 |
| 2015 | 6293 |
| 2016 | 6482 |

Under the Forestry Programme 2014-20⁷ the target was 6,600 ha in 2016, increasing incrementally to 8,290 ha/year by 2020 as per the Forestry Programme 2014 to 2020⁸

- Harvest

The current Roundwood Production Forecast indicates a slightly higher harvest when compared with the 2011 forecast⁹ over the common reporting period 2016-2028, there are relatively small differences in total volume 66.55 million m³ compared with the previous forecast estimate of 66.04 million cubic metres. m. However, there are year-on-year differences of up to +/-14% in forecast NRV, due principally to the private sector ROI forecast NRV.¹⁰

Table 2: A comparison of the forecasted net realisable commercial roundwood volume for the period 2016-2028 based on the 2011 and 2016 forecasts (see footnotes 6 and 7 for further background).

| <i>Roundwood Production Forecast period</i> | <i>million cubic metres</i> |
|---|-----------------------------|
| 2011-2028 forecast | 66.55 |
| 2016-2035 forecast | 66.04 |

The greatest difference between the 2016 and the 2011 forecast relates to the net realisable by harvest type. Thinning volume in the 2016 forecast is forecast to account for just 22.04 million

⁶<http://www.agriculture.gov.ie/forests-service/forests-service-general-information/forest-statistics-and-mapping/afforestation-statistics/>

⁷<http://www.agriculture.gov.ie/forests-service/forests-service-general-information/forest-statistics-and-mapping/afforestation-statistics/>

⁸ <http://www.agriculture.gov.ie/media/migration/forestry/forestry-programme-2014-2020/IRELAND-Forestry-Programme-2014-2020-230215.pdf>

⁹ http://www.coford.ie/media/coford/content/publications/coford-articles/Roundwood%20Forecast_web.pdf

¹⁰ <http://www.coford.ie/media/coford/content/publications/2016/Coford-Roundwood-Prod-1635020916.pdf>

cubic metres or 19% of total volume over the forecast period, with the balance of 91.66 million cubic metres or 81% of volume coming from clearfells. When compared with the 2011 forecast over the period 2016-2028 there is a decline in thinning volume from 33% of total volume to 23%. Spruce (includes all spruce species) with a forecast NRV of 97.61 million m³ or 85.9% of total volume over the period, dominates the forecast volumes. In the 2011 forecast it accounted for almost the same proportion (84%) of total volume.

- Deforestation

Using sample based NFI data, collected over a four year cycle, deforestation has been estimated at 1,200 ha/year previously. Research to investigate whether other methods and data sources can be employed to generate more accurate statistics has been undertaken which suggests that deforestation rates are lower than previously estimated. By combining aerial photography, satellite imagery and a number of additional data sources, Devaney et al. (2016) estimate a national deforestation rate of 0.103% over the period 2000 to 2012¹¹. For the period 2010 - 2012, deforestation was estimated at 350.9 ha/year nationally.

1.2 Policies and measures in the forest sector

Since the information on LULUCF Action Plans was provided by Ireland at the end of 2014 a number of new initiatives related to forests and climate change have been put in place. A short description follows.

Forest management and thinning

Under the forestry programme 2014-2020 grants are available for the creation of new forest roads at first thinning stage in order to facilitate roundwood mobilisation. In 2015 65 km of new roads were constructed.

Knowledge transfer

Knowledge transfer groups have been established under grant aid to foster sustainable forest management and roundwood mobilisation.

Section 2

Grazing land management and Cropland management activities

2.1 New policies and measures relating to agriculture

The following measures are being implemented for agriculture since the preparation of Irelands LULUCF Action Plan and submitted to the Commission in February 2015. These new measures are described below. The coverage of these measures, including those measures described in Irelands LULUCF Action plan, is detailed in Tables 1-3.

Common Agricultural Policy (2014-2020)

The Common Agricultural Policy (CAP) is the agricultural policy of the EU and comprises of two complementary Pillars:

¹¹ Devaney, J.L., Redmond, J.J., Cott, G.M. & O'Halloran, J. 2016. Deforestation in Ireland 2000 - 2012. Irish Forestry 73 (1&2) 8-24. <https://journal.societyofirishforesters.ie/index.php/forestry/article/view/10570>

- Pillar I deals with direct payments to farmers and market measures,
- Pillar II (Rural Development Programme) covers multi-annual rural development measures which include those beneficial to the environment and climate change.

The CAP has many aspects that can have an impact on stimulating removals and reducing emissions from the GM and CM LULUCF sectors.

CAP Pillar I

Direct payments contribute to providing basic public goods in the form of **Cross Compliance** and **Greening**.

Cross Compliance includes provisions for the sustainable use of land such as contributing to the maintenance or enhancement of soil organic carbon. Soil protection and soil carbon protection aspects are included in the Good Agricultural and Environmental Condition criteria (GAEC) under Cross Compliance (GAEC 4 & 6).

A new component of the CAP, **Greening**, incorporates action towards the maintenance of permanent pasture, and the integration of ecological focus areas and the practice of crop diversification within arable farmland. It rewards farmers for adopting and maintaining a more sustainable use of agricultural land as well as enhancing the overall environmental performance of the CAP.

Environmentally Sensitive Permanent Grassland - under this measure, permanent pasture designated as Environmentally Sensitive must not be ploughed or converted. In Ireland, these are specific areas within Natura 2000 designated sites.

CAP Pillar II: Rural Development Programme 2014-2020

Ireland's RDP 2014-2020 was formally adopted by the EU Commission on the 26th of May 2015. The Department of Agriculture, Food and the Marine (DAFM) supports a strong Rural Development Programme, co-funded by the EU, to develop and incentivise sustainable resource efficient farming activities. Substantial progress has been made in Ireland to integrate environmental considerations into agricultural policies and activities.

The Irish RDP provides support for a range of activities which contribute to the reduction of agricultural emissions, including emissions and removals in the land sector including:

Measure 1.1: Knowledge Transfer Groups (KTG)

The KTG provides a platform for the dissemination of best agronomic and environmental practice via professional advisor facilitated farm discussion groups. Specific actions include the preparation of a Farm Improvement Plan to incorporate a Grassland Management Plan on dairy, beef and sheep farms. The Grassland Management Plan has three elements embracing soil fertility, reseeding policy and grass utilisation.

Measure 10.1: Green Low-carbon Agri-environmental Scheme (GLAS)

GLAS is an agri-environmental scheme that applies agricultural production methods to address issues of climate change, water quality and biodiversity loss. Specific actions within the scheme relate environmental management activities on grassland (low-input permanent pasture, species rich grassland, traditional hay meadows), to reducing soil erosion and nutrient leaching on cropland (min-till establishment practices, winter cover crops)

Measure 11.1 and 11.2: Organic Farming Scheme (OFS)

The OFS aims to increase the share of organic farming in Ireland. The OFS supports the conservation and build-up of soil organic carbon through organic manure management practices, crop rotations and fodder cropping.

Measure 13.2: Area of Natural Constraints (ANC)

The ANC supports the continuity of agricultural practices in regions facing natural or other specific constraints, thereby contributing to the maintenance of the sustainable farming systems, which in particular take account of environmental protection requirements.

Table 1: Practices and measures relating to Grassland Management (GM)

| <u>Practice</u> | <u>Policy instrument/ regulation</u> | <u>Measure/ programme</u> | <u>Sub-measure/ specific action</u> | <u>Coverage 31st December 2016</u> |
|----------------------------------|---------------------------------------|---|--|---|
| Maintenance of permanent pasture | CAP (Pillar I) 2014-2020 | Greening | Maintenance of permanent pasture <ul style="list-style-type: none"> Environmentally Sensitive Permanent Grassland | Applies to all grassland farmers. A 5% tolerance applies to the State <ul style="list-style-type: none"> There are specific areas within Natura 2000 designated sites that must not be ploughed or converted |
| | Rural Development Programme 2014-2020 | Areas of Natural Constraint (ANC's) | n/a | The ANC replaced the DAP for the CAP programme period 2014-2020. 95,000 farmer beneficiaries. Scheme eligibility criteria to be reviewed in 2018. |
| | Rural Development Programme 2007-2013 | Disadvantage Area Payments (DAP) | n/a | 95,000 farmers covering 3.3million hectares |
| Management of permanent pasture | Rural Development Programme 2014-2020 | Knowledge Transfer Programme (KTP) | Grassland Management Plan | 17,000 dairy and beef farmers |
| | | Green Low-carbon Agri-environmental Scheme (GLAS) | Traditional Hay Meadow | 18,958 farmers maintaining 70,000 hectares |
| | | | Low-input permanent pasture | 42,267 farmers maintaining 290,522 hectares |
| Nutrient management on grassland | Rural Development Programme 2014-2020 | Green Low-carbon Agri-environmental Scheme (GLAS) | Commonage Management Plan (CMP) and Commonage Farm Plan (CFP) | 6,571 farmers are in GLAS with commonages with a further 2,715 with commonages still in AEOS. |
| | | | Use of Low Emissions Spreading Systems (LESS) | 4745 farmers |
| | Rural Development Programme 2007-2013 | Agri-environmental Options Scheme (AEOS) | Use of Low Emissions Spreading Systems (LESS) | 167 farmers |

Table 2: Practices and measures relating to Cropland Management (CM)

| <u>Practice</u> | <u>Policy instrument/ regulation</u> | <u>Measure/ programme</u> | <u>Sub-measure/ specific action</u> | | <u>Coverage 31th December 2016</u> |
|---------------------------------------|--|---|---------------------------------------|---|--|
| Crop/ soil management | CAP (Pillar I) 2014-2020 | Greening | Crop diversification | 2 crops | 2,588 farmers with 51,077 hectares of arable land |
| | | | | 3 crops | 3490 farmers with 269,233 hectares of arable land |
| | | Protein Crop Scheme | | | 12,514 hectares |
| | Rural Development Programme 2014-2020 | Knowledge Transfer Programme (KTP) | Tillage KT Groups | | |
| | | | | Minimum tillage | 324 farmers covering 10,338 hectares |
| | | Green Low-carbon Agri-environmental Scheme (GLAS) | Cover crops | 2,114 farmers covering 26,208 hectares | |
| | Rural Development Programme 2007-2013 | Agri-environmental Options Scheme (AEOS) | Cover crops | | 81 farmers covering 911 ha hectares |
| | | Agri-environmental Options Scheme (AEOS) | Minimum tillage | | 16 farmers covering 917 ha hectares |
| Fallow management | CAP (Pillar I) 2014-2020 | Greening | Ecological Focus Areas (EFA's) | | 40,005 hectares * (only claimed EFA data available. No more data is recorded once the minimum 5% EFA threshold is reached) |
| | Rural Development Programme 2014-2020 | Green Low-carbon Agri-environmental Scheme (GLAS) | Environmental management of set-aside | | 918 farmers covering 1,995 hectares |
| | | | Arable grass margins | | 237 farmers establishing and maintaining 420 km of margin |
| Rural Development Programme 2007-2013 | Agri-environmental Options Scheme (AEOS) | Arable margins | | 54 farmers establishing and maintaining 68 km of margin | |

Table 3: Practices and measures common to both Grassland Management (GM) and Cropland Management (CM)

| <u>Practice</u> | <u>Policy instrument/ regulation</u> | <u>Measure/ programme</u> | <u>Sub-measure/ specific action</u> | <u>Coverage 31st December 2016</u> |
|------------------------|--|---|---|---|
| Soil management | CAP (Pillar I) 2014-2020 | Cross Compliance | SMR 3: Conservation of natural habitats | Applicable to farmers with land designated as SAC |
| | | | GAEC 4: Minimum soil cover | Applicable to all farmers |
| | | | GAEC 6: Maintenance of soil organic matter | Applicable to all farmers |
| Nutrient management | EU Nitrates Directive (91/767/EEC) | Ireland's 3 rd National Action Programme (NAP) for the period 2013-2017 | Compliance with 170/250kg organic N/hectare/year limit. Fertiliser applied in accordance with crop requirements. | Applicable to all farmers |
| Re-vegetation | Rural Development Programme 2014-2020 | Green Low-carbon Agri-environmental Scheme (GLAS) | New hedgerow establishment | 7,627 farmers establishing 1,298km of new hedgerow |
| | | | Native tree establishment | 4978 farmers establishing between 250-450m ² of native broadleaved groves each |
| Organic farming | Rural Development Programme 2007-2013 | Organic farming scheme | | 1785 organic farmers farming 77,419ha |
| | Rural Development Programme 2014-2020 | | | |
| Landscape management | EIA regulations | Re-structuring of holdings | Boundary removal above 500 metres, land restructuring above 5 hectares | 560 screening applications since 2011 (year the regulations were enacted) |
| | | Commencing to use uncultivated land or semi-natural areas for intensive agriculture | Threshold: above 5 hectares | 99 screening applications since 2011 |
| | | Land drainage works on lands used for agriculture including | Threshold: above 15 hectares | 92 screening applications since 2011 |
| Renewable energy crops | Bio-energy Scheme 2007-2010 | | | 2805 ha of willow and miscathus |
| | Rural Development Programme 2007-2013 | | | 548 ha of willow and miscathus |

Section 3

New policies applicable to forest and agriculture

Climate change adaptation

An agriculture and forest sector adaptation plan, part of the National Climate Change Adaptation Framework, has been released in draft form for public consultation¹² and currently analysing submissions received.

Mitigation plan

The Climate Action and Low Carbon Development Act 2015 provides for the submission of five-yearly National Mitigation Plans and iterative National Adaptation Frameworks to Government.

The Department of Agriculture, Food and the Marine facilitated a public consultation process, inviting written submissions from interested parties on a discussion document on the potential for greenhouse gas mitigation within the agriculture and forest sector¹³. The National Mitigation Plan (NMP) is currently under development and agricultural sectoral mitigation measures have been prepared for input to the NMP. The Department of Communications, Climate Action and Environment, who are the lead in the area, published the draft NMP for public consultation on 15 March with a view to publishing the final NMP in June in line with the statutory deadline.

Bioenergy plan

The Draft Bioenergy Plan recommends, subject to further Government and EU Commission State Aid approval, the introduction of a Renewable Heat Incentive (RHI) for larger heat users. It would be aimed at larger industrial and commercial installations but which fall outside of the EU Emissions Trading System (ETS) threshold, to change to heating solutions that produce heat from renewable sources¹⁴.

¹² <https://www.agriculture.gov.ie/press/pressreleases/2016/november/title,104088,en.html>

¹³ <https://www.agriculture.gov.ie/ghgmitigationconsult/>

¹⁴ <http://www.dccae.gov.ie/energy/en-ie/Renewable-Energy/Pages/Bio-Energy.aspx>