



Society of Irish Foresters

# SOCIETY OF IRISH FORESTERS POLICY POSITION PAPER



DELIVERING A CARBON CAPTURE AFFORESTATION PROGRAMME

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# EXECUTIVE SUMMARY

This policy position paper proposes a radical set of proposals to reenergise Ireland's afforestation programme to play its part in achieving net zero carbon by 2050. Ireland's Climate Action Plan states:

*Afforestation is the single largest land-based climate change mitigation measure available to Ireland.*

We present an objective critique of Irish forestry and how recent failures must be addressed before the sector can play its part in achieving carbon neutrality by mid-century as set out in the Climate Action Plan.

## BACKGROUND ISSUES

**Historic:** Afforestation has been a cornerstone of forest policy since the foundation of the State when forest cover was little more than 1% of the land area. Afforestation has transitioned from providing a strategic supply of timber to providing a range of environment and recreation services.

**Who plants?** The afforestation policy focus has moved from the State to the private sector – mainly farmers – since the 1990s.

**Existing performance:** Unfortunately, the failure to achieve afforestation targets has been a feature of the sector over the past half century but especially since 2002 as afforestation has fallen from 15,054ha to an estimated 2,016ha in 2021. There has been a shortfall of 115,135ha over the period 2010 to 2021.

**Existing afforestation schemes:** There have been only limited changes to the afforestation schemes operated by the Forest Service, Department of Agriculture, Food and the Marine (DAFM) and no change to the implementing structures. The failure of the grant and premium rates to recognise the cost structure and regulatory compliance and to keep pace with inflation has contributed to the decline in afforestation. As a result, confidence within the sector is at an all-time low.

**Existing accountability:** Nobody has been held accountable for Ireland's recent dismal afforestation programme, while ownership of and responsibility for policy targets are non-existent.

# CLIMATE ACTION PLAN

**Plan content:** While the Plan acknowledges afforestation as the *single largest land-based climate change mitigation measure available to Ireland*, the measures proposed lack imagination and innovation, and represent a 'business as usual' approach which will not deliver viable annual afforestation programmes.

## REPORT PROPOSAL

To capture the true potential of afforestation to mitigate climate change we propose:

- An afforestation scheme that will leverage the carbon value sequestered by forests and use this to reward and incentivise farmers and landowners who plant.
- The development of a Forest Carbon Code (FCC) for Ireland with the revision and updating of the afforestation scheme to reflect the focus on carbon capture. The FCC would also have a trading platform allowing registered participants to sell their carbon to the State at a market adjusted value or to voluntary trading markets. A typical forest can provide the sequestration and permanent removal of 309 tonnes of CO<sub>2</sub> per ha with a conservative value of €7,910 based on €32 per tonne and allowing for a buffer of 20%. This is a conservative estimate as the Government's strategy is to increase the shadow price of carbon to €100/t by 2030 and €265/t by 2050.
- The creation of an independent Forest Development Agency (FDA) mandated to drive the new afforestation programme and be responsible for the overall development and promotion of the sector.

**Next steps:** To ignore the repeated failure of the current implementing State structures for afforestation and other forestry activities is to condemn the proposed carbon capture afforestation programme to a slow and lethargic roll out, lacking in commitment and responsibility for the achievement of targets. We propose the following four immediate steps to allow forestry to maximise its role in the Climate Action Plan:

- 1 A declaration that afforestation constitutes a **critical national Climate Change Plan priority, based on an annual afforestation programme of 10,000ha;**
2. A greatly increased incentive **package**, based on the development of a **Forest Carbon Code;**
3. A National level **promotion and information blitz**, reflecting the above; and
4. The creation of a **highly focused and resourced FDA**, to drive afforestation and development of the sector. It should incorporate some non-regulatory functions of the Forest Service, and should be led by a committed dynamic team.

# SOCIETY OF IRISH FORESTERS

## POLICY POSITION PAPER

### Delivering a Carbon Capture Afforestation Programme

#### **History of Forest Policy and Afforestation**

Afforestation has been a cornerstone of State forest policy since the foundation of the State. In the early years of the last century, influenced by limited supplies of timber during the First World War and the devastation of forests following the first Land Act in 1881, afforestation was seen as a means to reduce dependency on imported timber and to develop a strategic source of supply.

Afforestation proceeded at relatively low levels until the 1948 Programme for Recovery set an annual target of 25,000 acres (10,000 ha) for the next 40 years. It also introduced a “non-compete with agriculture for afforestation” land policy. With the Cameron Report in 1951, the focus of afforestation was divided between developing a commercial softwood resource and social objectives around increased rural employment. The First Programme for Economic Recovery in 1957 confirmed the afforestation target and the twin objectives of commercial and social forestry.

Afforestation, undertaken mainly by the State, gained momentum with between 8,000 and 10,000 ha being planted annually. In 1970 coinciding with the European Year of Conservation, there was a shift in policy to encourage public access and recreation – or open forest – and initiatives around wildlife natural area preservation.

Following the entry to the then European Economic Community, in 1973, land prices soared and afforestation decreased to 6,000 ha by 1979. With the introduction of the Western Package Scheme in 1981, afforestation by the private sector began to increase but it was not until the Scheme of Compensatory Allowances (with payments for 15 years) was introduced in 1987 that private afforestation achieved any momentum.

Against a background of attaining value for money from public expenditure and an increasing awareness of the potential for wealth creation from natural resources, a review of forest policy was undertaken in the mid-1990s. This review led to the formulation in 1996 of a *Strategic Plan* for the development of the sector. *Growing for the Future* was formulated in the context of increasing awareness of the environmental and social values of forestry, a decreasing ownership role of the State throughout Europe and developing regional and global regulatory frameworks for forestry. The main objective was to:

Develop forestry to a scale and in a manner which maximises its contribution to national economic and social well-being on a sustainable basis and which is compatible with the protection of the environment.

Despite recognition of the importance of environmental sustainability, the potential environmental benefits of forestry were not given a high priority in the strategy. The strategy set an afforestation target of 25,000 ha per annum up to 2000 and thereafter 20,000 ha until 2030 by which time some 18% forest cover would be achieved. In a review of the strategy, Bacon (2004)<sup>2</sup> noted that several of the fundamental targets that were set failed to be achieved **including annual afforestation with a shortfall of 70,000 ha** and achievement of adequate improvement in the compatibility of the forestry programme with other farm supports.

The economic crisis in 2009 resulted in a number of changes to the afforestation scheme, the most notable of which were to: (a) reduce the grant payments by circa 10% and reduce the premium payments for unenclosed planting for new approvals; (b) eliminate the area differential for premium payments; and (c) limit the amount of unenclosed land in any single application to 20%.

The overall objective of *Forest Products and People* (2014)<sup>3</sup> was:

To develop an internationally competitive and sustainable forest sector that provides a full range of economic, environmental and social benefits to society.

In terms of afforestation the target was 10,000 ha per annum up to 2015 and thereafter 15,000 ha per annum up to 2046 when 18% forest cover will be achieved. The report noted that annual afforestation had decreased from over 20,000 ha in 1996 to less than 7,000 ha over the previous three years and that **afforestation was 50% of the target** set in *Growing for the Future*.

The Forestry Programme 2014 – 2020<sup>4</sup> saw a number of changes around afforestation, the most important of which were (a) reduction in annual afforestation to circa 8,000 ha, (b) reduction in the number of premium payments to farmers from 20 to 15, (c) equalisation of premium payment between farmer and non-farmer and (d) increases in premium and grant aid in an attempt to reverse the cuts introduced in 2009.

The review<sup>5</sup> of *Forest products and people* in 2018 noted the **non-achievement of afforestation targets** and that at current afforestation levels of 7,000 ha per annum it would be 2087 before 18% cover is achieved. Despite the poor performance and the reduced targets in the Forestry Programme, the review confirmed afforestation targets set out in *Forest products and people*.

### **Afforestation Targets and Performance 2010 to 2021**

The non-achievement of afforestation targets has been a feature of the forest sector over the past half century despite repeated policy initiatives and good intentions. One has to go back to the period 1957 to 1974 to see any form of consistency in the achievement of afforestation targets.

Table 1 Afforestation Performance 2010 - 2021

Year	Afforestation Target (ha)		Afforestation (ha)	Achievement		Shortfall (ha)	
	Forest Policy	Forestry Programme		Forest Policy	Forestry Programme	Forest Policy	Forestry Programme
2010	20,000	10,200	8,314	42%	82%	11,686	1,886
2011	20,000	10,200	6,653	33%	65%	13,347	3,547
2012	10,000	10,200	6,652	67%	65%	3,348	3,548
2013	20,000	10,200	6,252	31%	61%	13,748	3,948
2014	10,000	8,000	6,156	62%	77%	3,844	1,844
2015	10,000	8,000	6,293	63%	79%	3,707	1,707
2016	15,000	8,000	6,500	43%	81%	8,500	1,500
2017	15,000	8,000	5,536	37%	69%	9,464	2,464
2018	15,000	8,000	4,025	27%	50%	10,975	3,975
2019	15,000	8,000	3,550	24%	44%	11,450	4,450
2020	15,000	8,000	2,434	16%	30%	12,566	5,566
2021	15,000	8,000	2,021	13%	25%	12,979	5,979
<b>Totals</b>	<b>180,000</b>	<b>104,800</b>	<b>64,386</b>	<b>36%</b>	<b>61%</b>	<b>115,614</b>	<b>40,414</b>

Recent afforestation performance (Table 1\*) has been a dismal 36% of the policy target which is equivalent to a shortfall of 115,135 ha over the period 2010 to 2021. In terms of the less demanding Forestry Programme goals, the performance is still only 62% and is equivalent to a shortfall 39,935 ha.

Despite the consistent poor performance and failure to meet either policy or programme targets year on year, there have been limited changes to the afforestation scheme operated by the DAFM in terms of incentives to afforest agricultural land and no change whatsoever to the implementing structures. In short nobody has been held to account and ownership of and responsibility for the policy target is non-existent.

There can be no rationale to continue with more of the same – repeated failure and zero accountability

### Barriers to Afforestation

Leaving aside land availability, there are a number of well recognised barriers to afforestation including the replanting obligation, long term nature of forestry, uncertainty regarding future premium payments, inadequate duration of premium payments (especially for broadleaves) and the perception that planting of agricultural land represents failure. More recently additional factors have come to the fore including the lack of confidence in the forest sector which is now at an all-time low, the additional regulatory environment leading to long delays in the granting of approvals for afforestation and other licensed activities e.g. harvesting, and the decrease or absence of a profit margin for forest companies and contractors undertaking afforestation.

The total value of premiums per Grant Premium Category (GPC) is now less than that in 2011 across the GPC 1 (unenclosed) to GPC 7 (beech) (Figure 1). There was a small increase in 2015, but this failed to bring the total value of payments in line with 2010. While there have been some changes to the qualifying requirements for some GPCs in the intervening years, the comparison remains valid. As noted previously, the term for premium payments to farmers was reduced from 20 to 15 years for both broadleaves and conifers in 2015.

\* The afforestation figure for 2021 is a Forest Service estimate, January 2022

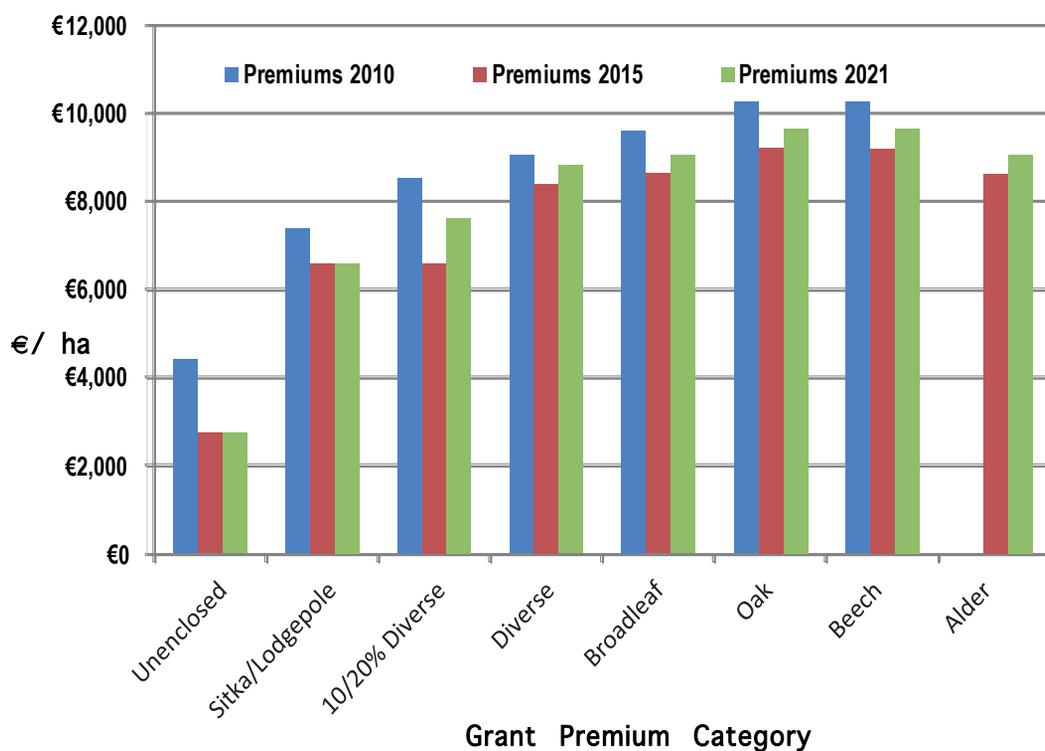


Figure1: Grant Premium Payments by species 2010 to 2021

An examination of the grant rates shows a marginally improved situation (Figure 2). There has been a small increase for all GPC classes between 2015 and 2021. However the grant for GPC 1 (unenclosed) is still less than in 2010. The decrease in grant payments for GPC 6 and 7 is in part due to changes in the stocking levels for these categories. What these small increases fail to recognise is the increasing costs associated with both the approval process and the subsequent forest establishment and maintenance to free growing stage

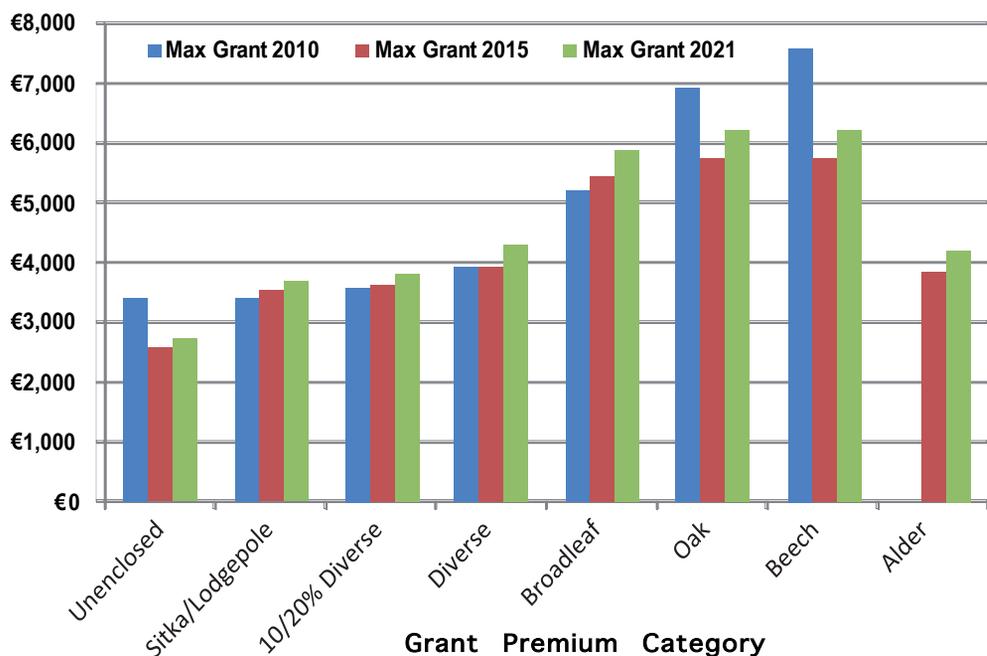


Figure 2: Maximum Afforestation Grant Rates (€/ha) for 2010, 2015 and 2021

Recent research has identified that it now takes an unprecedented five and a half days (professional forester, ecologist and office staff) to bring one ha from Form 1 submission through to the successful submission and approval of the Form 3. This represents a staggering increase of almost 60% when compared with values operating in 2006 and this despite improvements and efficiencies resulting from the more widespread use of information technology. This increase coupled with increasing labour and machine costs has resulted in the elimination of any profit margin for companies operating in the afforestation arena. At best they can only hope that they will recover their costs and in doing so retain their staff.

The consumer price index (CPI) shows an increase of 9.6% between 2010 and 2021 (Figure 3). When this is factored into the current levels of premium and grant payments then there is a decrease in their value over the period 2010 to 2021. This failure of payments to keep pace with inflation and to recognise the costs that operate within the afforestation sector is a contributor to the non-achievement of afforestation targets and if allowed to continue will see the accelerated exit of skilled forest labour from the sector.

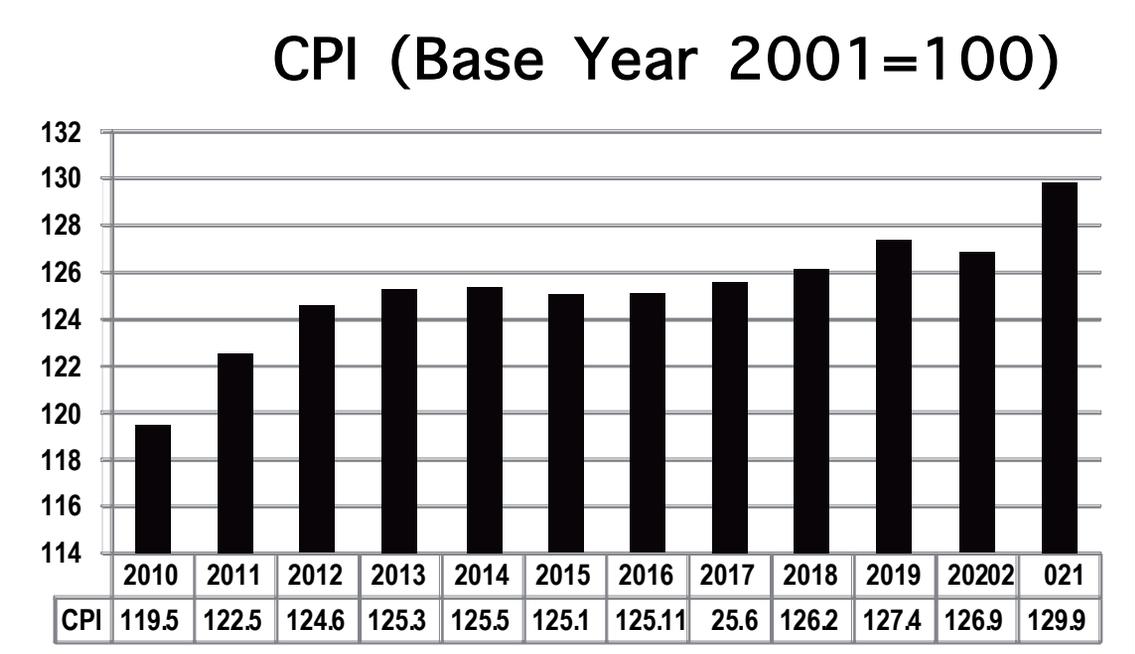


Figure 3: Consumer Price Index

**Land Availability**

Any afforestation programme is dependent on the availability of bare land for planting. Land is a finite resource with a number of competing interests including agriculture, industry development, housing and infrastructure. Furthermore, not all land is suitable for forestry due to existing use, fertility / soil type and location.

The COFORD Council Land Availability Working Group (WG) was established to consider issues relating to land availability and constraints and incentives to achieving forest cover goals. Its report in 2016 showed that there is potentially sufficient suitable land for the afforestation to reach the policy target of 18% forest cover at some date in the future. The WG report shows that potentially there was some 3.75 million ha which were technically suitable for afforestation in 2015 (Figure 4).

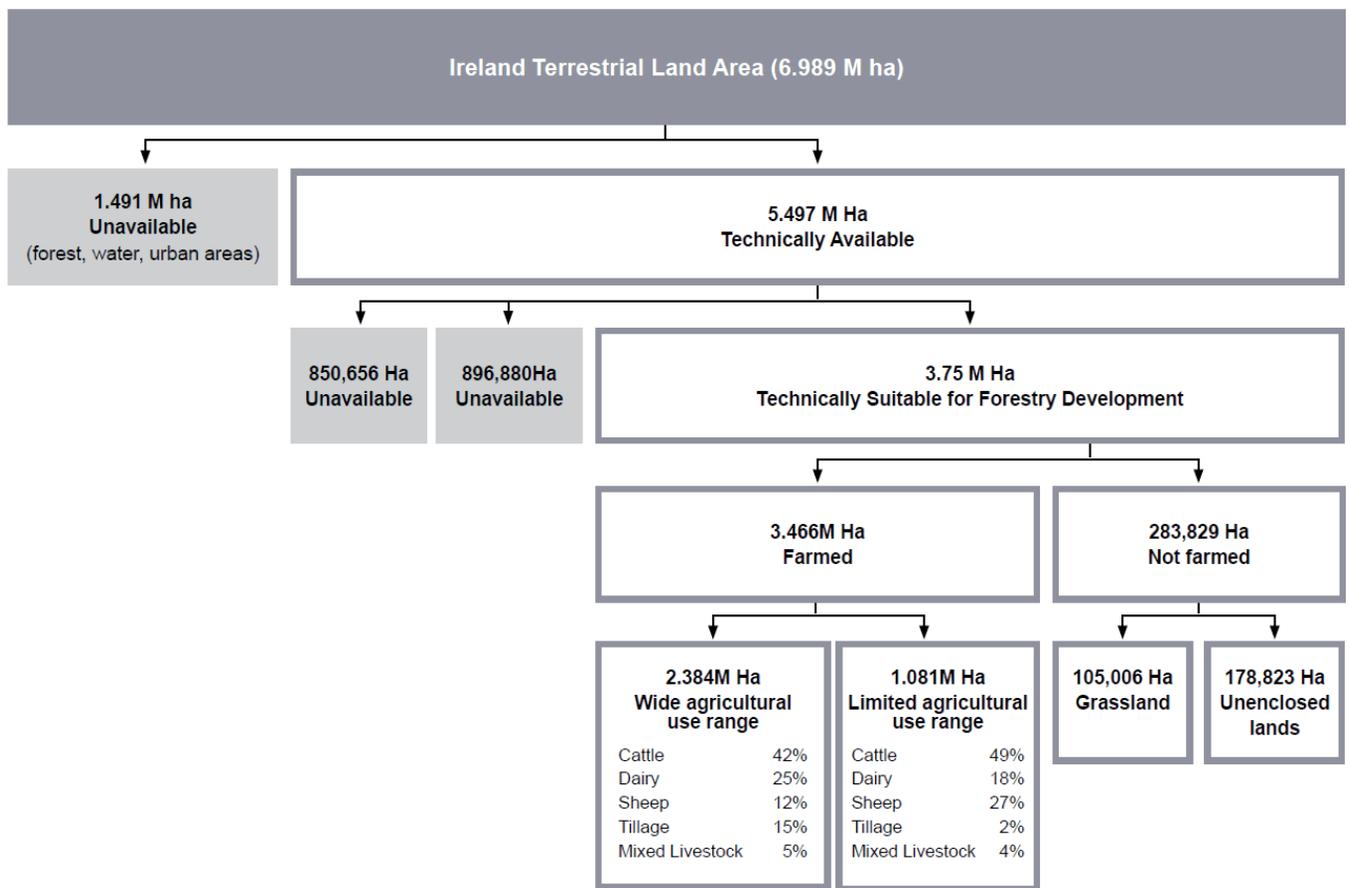


Figure 4. Land Potentially Suitable for Afforestation

However the 2.38 million ha classified as widely used for agriculture is unlikely to be afforested due to its current use. It is more likely that any future afforestation would come from the 1.08 million ha classified as “limited agricultural use” or the 0.28 million ha classified as “not farmed”.

Based on the report there is sufficient suitable land potentially available for future afforestation, provided the necessary incentives and supports are in place to leverage it from its current land use.

### Climate Action Plan

The Government has recently published its Climate Action Plan<sup>7</sup>. This commits the agriculture sector to a 22-33% greenhouse gas (GHG) emissions reduction by 2030 and the Land Use, Land Use Change and Forestry (LULUCF) sector to a 37-58% emissions reduction in the same timeframe.

The Plan recognises that *afforestation is the single largest land-based climate change mitigation measure available to Ireland and that management of our existing forests potentially provides opportunities to increase carbon stores. The measures proposed are:*

- Project Woodland will facilitate the preparation of a new forest strategy that recognises the multiple benefits that forests provide. *(This is not new and has been part of forest policy since 1996.)*
- The government will continue to promote afforestation in order to increase planting to a rate consistent with realising our 2030 ambition, and contribute to achieving carbon neutrality no later than 2050 *(This is short on targets but based on previous performance we can expect business as usual and a continued shortfall in afforestation into the future.)*
- A new Forestry Programme will launch in 2023 focussing on the importance of climate smart forestry. *(This is short on detail and can only be considered as aspirational at this moment in time.)*
- We will afforest in pursuit of commercial, climate, water and biodiversity objectives, both through planting and natural regeneration *(This is simply a rewording of existing forest policy on afforestation and is nothing new or innovative.)*
- The government will facilitate the creation of small native forests as part of our agri-environment schemes avoiding poor citing of trees to ensure biodiversity as well as carbon goals are met. *(There is yet again a lack of detail and clarity in relation to what exactly is being proposed.)*

The plan is extremely disappointing in terms of any innovation or measure(s) to increase the current levels of afforestation. It is a 'business as usual approach', lacking in imagination, detail and any real commitment.

Under the Plan, the carbon tax is set to increase up until at least 2030 but there is no mention of any carbon reward for carbon storage, carbon sequestration or reduced carbon emissions. The policy of penalise emitters and fail to reward sequesters continues i.e. business as usual.

### **Future Carbon Capture Afforestation Proposals**

Forest policy, Forestry Programmes and afforestation schemes have failed to learn from the lessons and mistakes of the past. This is evidenced by the under-achievement of afforestation targets. What is needed urgently is a new and innovative approach that actually incentivises farmers and other landowners to afforest part of their land and concurrently recognises the barriers to afforestation and addresses these in future afforestation schemes.

What we propose is an afforestation scheme that will leverage the carbon value sequestered by forests and use this carbon value to reward and incentivise farmers and landowners to undertake afforestation. Up until now the State has quietly recorded the carbon sequestered through afforestation in its national carbon accounting while at the same time giving no reward to forest owners. We refer to this as *stealing by stealth* and it cannot, and will not, be allowed to continue.

Key features of the proposed Carbon Capture afforestation scheme are:

- It recognises that carbon sequestered by forests has a monetary value
- Provides an additional income to forest owners which will continue years after the premium payments have ceased
- Participants will receive either an adjusted market value for the number of carbon credits issued or be free to sell their carbon credits into the voluntary carbon market
- Participants will still be eligible to receive grant and premium payments under the revised and updated afforestation scheme(s)
- Afforestation on mineral soils only will be eligible
- The carbon sequestered will be subject to third party independent verification and validation.

A critical first step is for DAFM to establish a Forest Carbon Code (FCC) for Ireland along the lines of the Woodland Carbon Code (WCC) in the UK but tailored to meet the needs and demographics of the Irish market. The WCC is the quality assurance standard for woodland creation projects in the UK, and generates independently verified carbon units. Backed by the UK Government, the forest industry and carbon market experts, the Code is unique in providing woodland carbon units in the UK. The WCC is internationally recognised for high standards of sustainable forest management and carbon management and is endorsed by International Carbon and Offset Alliance (ICROA), the global umbrella body for carbon reduction and offset providers in the voluntary market.

The FCC in addition to setting the quality assurance standard for forest carbon would provide the tools for project registration, carbon prediction, carbon measurement and a carbon register. It would also have a trading platform allowing registered participants to sell their carbon to the State at a market adjusted value. Alternatively owners could sell their carbon into the voluntary market. Compliance with the FCC is the key to obtaining value for the carbon sequestered.

The carbon value per hectare planted is related to a combination of soil type/productivity, species, rotation age and forest management regime. Longer rotations, no thinning and continuous cover forestry (CCF) facilitate higher levels of carbon sequestration. Using GPC 3 with a Sitka spruce / Alder crop under a forty year rotation as an example, results in the sequestration and permanent removal of 309 tonnes of CO<sub>2</sub>. Some of this carbon e.g. 20% would be held in reserve as a buffer against the possible impact of disease or wind. Typically the sale of carbon is spread over the rotation and owners would have the option to sell carbon as pending issuance units (PIUs) before the carbon is actually sequestered or as forest carbon units (FCUs) when the carbon has been sequestered with PIUs attracting a discount in value.

The value of forest carbon is very much dependent on its “pedigree” i.e. compliance or non-compliance with any one of a number of voluntary standards. For illustrative purposes this report uses the Irish government shadow price for carbon for non-European Trading Scheme (ETS) sectors for 2020 which is €32. This gives a potential value of the carbon sequestered as €7,910 having allowed for a buffer of 20%. There will of course be

audit costs for verification and validation but these can be reduced through collaboration between owners. Carbon values of this order are more than sufficient to incentivise farmers and landowners to afforest areas of the order of 10,000 to 15,000 ha per annum. The impact on agricultural production will not be significant based on previous experience where marginal areas of farms have been planted and typically the same or a similar number of livestock units have been retained.

**The aim of the carbon afforestation scheme is not to displace agricultural production but to integrate carbon capture afforestation within the farm enterprise providing an additional source of revenue over a prolonged period.** However where livestock numbers are reduced there is a further benefit in the reduction of livestock emissions from the farm enterprise in question.

While the FCC is being developed, DAFM should, as a matter of urgency, review the grant and premium rates for afforestation. The findings from the recently completed project on economic activity in the forest sector can serve as the starting point for this review. An immediate increase in premium rates and grant levels will serve to show some commitment by the State towards its aim to increase the rates for afforestation and in recognising the cost structure that now operates. Once the FCC is developed then the current GPCs can be tailored to reflect the requirements of the FCC providing a new and innovative afforestation scheme in line with the State's targets under the Climate Action Plan for the LULUCF sector.

To ignore the repeated failure of the current implementing State structures for afforestation and indeed for the other activities within the sector is to condemn the proposed carbon capture afforestation to a slow and lethargic roll out lacking in commitment and accountability for the achievement of targets. It is time for change and hopefully the catalyst for this will be the recognition of the massive potential for climate mitigation presented by afforestation. What is required is a new approach. We propose the creation of an independent Forest Development Agency (FDA) which is mandated to drive the new afforestation programme. The agency would be responsible for the promotion of forestry, and the overall development of the sector.

### **Next Steps**

Failure to reverse the rapid decline in afforestation rates has demoralised the sector and probably fatally compromised its capacity to contribute to climate change mitigation, at anywhere near its potential. Unless unprecedented, dynamically driven remedial policies are formulated and highly focussed and fully resourced structures are deployed to promote and drive their implementation, an historic opportunity for relatively "painless" mitigation will have been missed. The consequence of this will be the imposition, within our overall national mitigation targets, of more "painful" measures in other sectors, where resistance will jeopardise delivery.

Such policies and structures must include:

- A declaration that afforestation constitutes a **critical national Climate Change priority**, and a heavily streamlined and possibly truncated licensing and approval system is necessary to drive it forward;
- **A greatly increased incentive package**, based upon the development of a Forest Carbon Code reflecting an estimate of carbon capture value, should be elaborated and publicised immediately
- A National level **promotion and information blitz**, reflecting the above and how carbon capture and trading might work, should be designed and publicised and targeted at the farming and private planting community, as well as the general public
- The creation of a **highly focussed and fully resourced independent agency** (Forest Development Agency) should be initiated immediately (given lead-in time delays); it should be mandated to drive the newly energised Afforestation Programme promotion and information blitz when and as it comes on stream; it should report to the Department and the Minister and ultimately be constituted as a statutory body; it should incorporate some non-regulatory functions of the Forest Service, and should be led by a highly dynamic team.

## References

- <sup>1</sup>Department of Agriculture, Food and Forestry (1996) *Growing for the Future: A Strategic Plan for the Development of the Forestry Sector in Ireland*
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- <sup>3</sup>Department of Agriculture, Food and the Marine (2014). *Forest product and people. Ireland's forest policy – a renewed vision*. Department of Agriculture, Food and the Marine. Dublin
- <sup>4</sup>DAFM (2015) Forestry Programme 2014 – 2020: IRELAND. <https://www.agriculture.gov.ie/>
- <sup>5</sup>COFORD, 2018. COFORD Forest Policy Review Group Report on 'Forests, products and people - Ireland's forest policy – a renewed vision'(2014). A Report on Policy Implementation with Recommendations. Department of Agriculture, Food and the Marine, Dublin.
- <sup>6</sup>COFORD. 2016. Land Availability for Afforestation – Exploring opportunities for expanding Ireland's forest resource. COFORD Land Availability Working Group. COFORD, Dublin
- <sup>7</sup>The Climate Action Plan 2021 <https://www.gov.ie/en/publication/6223e-climate-action-plan-2021/>
- <sup>8</sup><https://woodlandcarboncode.org.uk/>
- <sup>9</sup>Forestry Services Ltd. & Phillips, H. (2021) *The estimated employment and economic activity associated with the forestry sector*. Report commissioned by COFORD, Dublin



Society of Irish Foresters

## SOCIETY OF IRISH FORESTERS

The Society of Irish Foresters is an all-Ireland organisation which was founded in 1942. Its main aims are to spread knowledge of forestry and to improve professional standards in Irish silvicultural practice. To that end the Society publishes an annual scientific and technical journal *Irish Forestry*, organises field days, public lectures, conferences, CPD programme, international study tours and produces position papers on forest policy, research and education. The Society is committed to the sustainable development of *Irish forestry*. The Society is dedicated to promoting forestry as a renewable resource combining production goals with forest biodiversity protection and enhancement. Technical membership comprises professional foresters with university or equivalent degrees in forestry while associate membership is open to supporters of the Society's objectives.

