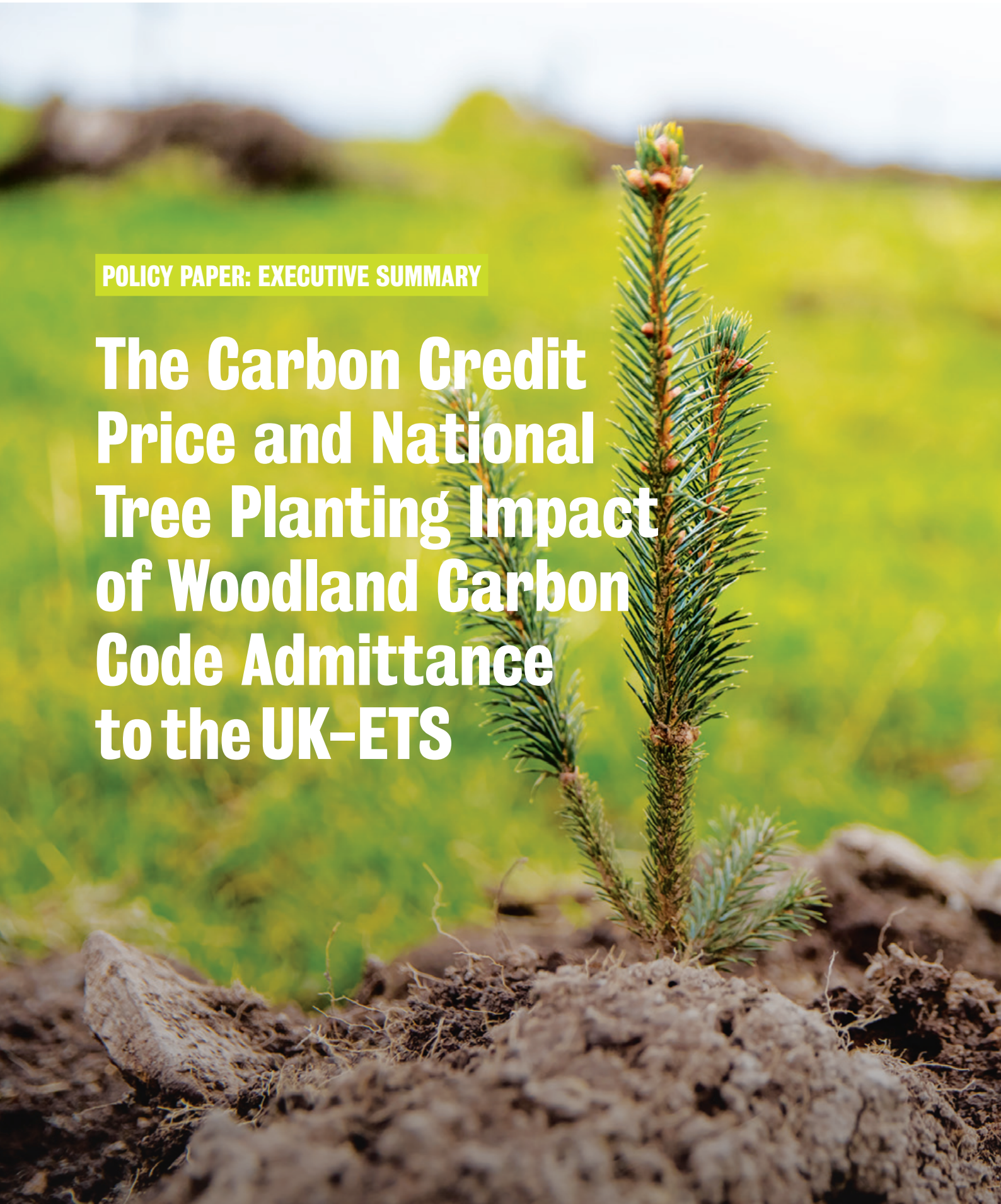


POLICY PAPER: EXECUTIVE SUMMARY

The Carbon Credit Price and National Tree Planting Impact of Woodland Carbon Code Admittance to the UK-ETS



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HEADLINE RESEARCH FINDINGS

This Executive Summary presents the findings and recommendations from a UK voluntary carbon market (“VCM”) policy paper in the context of the UK Woodland Carbon Code (“WCC”) and the UK ETS as an appropriate long-term market for high-quality nature-based greenhouse gas removals (“GGRs”). Summary findings from “**The Carbon Credit Price and National Tree Planting Impact of Woodland Carbon Code Admittance to the UK-ETS**” are as follows:

- Low voluntary carbon credit prices are the key economic reason why the UK is so far behind in achieving its national tree planting targets (i.e. less than half and not exceeding 14k hectares out of an annual 30k hectare tree planting target).
- At current voluntary carbon credit prices, only just over half of the total UK area with commercial afforestation potential, is currently considered economically viable (or ‘unlocked’) for afforestation (i.e. where land’s current afforestation value is higher than its agricultural value), although there are significant variations by nation, with the situation in England and Wales, significantly worse versus Scotland.
- Without a significant increase to WCC voluntary carbon credit prices, it is highly unlikely that the UK will achieve its national tree planting targets by 2050.
- The policy paper recommends admitting WCC carbon credits into the UK-ETS, which it finds could immediately increase the price of these credits by 46-67%, which would economically unlock an additional 11% to 26% of total afforestable land in the UK, representing c.43k-107k hectares of land, and take the UK much closer to achieving its national tree planting ambitions.
- The paper finds that 7.5-19m tonnes of atmospheric carbon dioxide, or equivalent, could be additionally and permanently sequestered as a result of WCC admittance into the UK ETS.
- The paper estimates the amount of land suitable for commercial forestation that could be unlocked if the WCC is admitted to the UK ETS. It does not consider how much additional purely broadleaf-focused afforestation land could also be unlocked as a result of admittance, and therefore the estimated positive impacts on additional UK tree planting and carbon sequestration reported are highly conservative.

The full policy paper can be accessed [here](#).

RESEARCH AUTHORS AND CONTRIBUTORS

This is an Executive Summary of an applied research collaboration policy paper published in February 2024 and co-authored by Raúl C. Rosales (Professor of Practice in Net Zero Asset Management at King’s College London and Senior Executive Fellow at Imperial College Business School), Rym M’Halla (Professor of Systems Engineering at King’s College London) and Richard Kelly (Co-Founder and Co-Lead Manager of Foresight Sustainable Forestry Company Plc (“FSF”). It is published and co-branded by King’s College London and Imperial College Business School’s Centre for Climate Finance & Investment, with an instrumental industry contribution from Foresight Group, a sustainability-led alternative assets and SME investment manager and the investment manager to FSF, the London Stock Exchange’s first listed investment company investing into natural capital.

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UK NET ZERO CLIMATE CHANGE CONTEXT

The UK is one of the least forested countries in Europe, with only 13% canopy cover, versus nearly 50% on average across Europe. A key element of the UK Government's Net Zero plan is to increase tree canopy cover by 1m hectares, taking the UK to be 17% forested by 2050. The WCC is the UK's issuer of voluntary carbon credits for afforestation schemes. It issues woodland creation developers ("**developers**") with one carbon credit for each tonne of carbon dioxide, or equivalent, that is additionally and permanently sequestered from the atmosphere resulting from an afforestation scheme. Carbon credits can ultimately be sold by developers to companies with net zero pledges, who can retire these credits to offset the residual balance of un-abatable emissions from within their business and/or elsewhere in their supply chains.

The ability of developers to economically convert agricultural land into woodland and commercial forestry depends on the land's afforestation value exceeding its inherent agricultural value. Underpinning the afforestation value is the price of WCC voluntary carbon credits. The higher the voluntary carbon credit price, the more and faster afforestation-based land use change can occur.

THE UK'S NATIONAL TREE PLANTING ECONOMIC CHALLENGE

VCs are nascent, and current WCC prices of £25 per tonne, represent a fraction of those achieved on compliance carbon markets, such as the UK Emissions Trading Scheme ("**UK-ETS**"). The lack of a long-term and stable policy, the absence of a price signal for investors and insufficient economic incentives to support afforestation have resulted in the UK failing to meet its national tree-planting targets, since their inception in 2019. Since inception of these targets, the UK consistently failed to achieve annual targets and has never achieved more than half of each year's target.

In pursuit of establishing a price signal, the analysis involved utilising the price elasticity of supply when admitting the WCC into the UK ETS. This analysis utilised public data from the UK Government and Intercontinental Exchange ("**ICE**"), considering UK-ETS Allowances to estimate a range of prices for WCUs if they were admitted to the UK-ETS. The research's model forecast, with a 95% confidence interval, that admitting WCC carbon credits into the UK-ETS would increase admitted WCC carbon credit prices to £41 to £47 per credit.

Foresight Group has identified 4,500 specific properties across the UK with strong commercial afforestation potential (based on the application of a series of proprietary map-based afforestation screening criteria), that extend over an area of c.800k hectares. By comparing each property's agricultural value, with its afforestation value, using current WCC carbon credit prices, the policy paper finds that only 410k hectares, or 53% of the total UK area identified with afforestation potential, is currently considered economically viable for afforestation – i.e. where the land has a higher afforestation than agricultural value.

The situation varies highly by nation. In Scotland, 99% of the 240k hectares identified with afforestation potential is already considered economically viable for afforestation with current WCC prices. This likely explains why afforestation rates in Scotland (overwhelmingly the largest contributor to UK planting for more than a decade) are the highest across the UK whilst at the same time noting that it only achieved 54% of its planting target last year (24% down from the prior year) which implies that further economic incentive is still required before planting targets in both Scotland (and therefore the UK overall) can be achieved. In England and Wales, where agricultural land values are higher, the picture is different. In England, just 35% of the 454k hectares identified with afforestation potential are already considered economically viable for afforestation with current WCC prices. In Wales, just 22% of the 77k hectares identified with afforestation potential are considered economically viable for afforestation with current WCC prices.

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THE UK'S NATIONAL TREE PLANTING ECONOMIC CHALLENGE CONTINUED

The policy paper shows evidence that low WCC carbon credit prices are a key reason why the UK, and Wales and England in particular, are so substantially behind on national tree planting targets. Without a change to WCC carbon credit prices, all else equal, it is highly unlikely that the UK will achieve its national tree planting targets. This is because 47% of the total area identified with afforestation potential will likely remain in heavily subsidised agriculture without sufficient economic incentives, certainty about the route to market and relatively stable pricing for carbon for the land use change to forestry to take place.

AN IMPACTFUL SOLUTION

The policy paper finds that admitting WCC voluntary carbon credits, called in the paper "Woodland Carbon Units ("WCUs")" into the UK-ETS could significantly increase the price of WCUs. UK-ETS certificates/allowances already trade at a significant premium to WCUs, trading at between £35-90 per tonne. Aligned with current UK-ETS allowances and based on information from the UK Government regarding its supply, the research focuses on the price elasticity of supply concerning historical UK-ETS trades. Employing a reliable statistical tool, the analysis delves into the inclusion of WCC in the UK ETS. As detailed in the policy paper, the research indicates that the admission of WCUs into the UK ETS could lead to a substantial increase in WCU prices. The estimation suggests a potential rise of approximately 46-67%, increasing the WCC carbon credit price from £28 per unit currently to a projected range of £41 to £47 by admitting WCC carbon credits into the UK-ETS.

The findings conclude that if the WCC is admitted into the UK ETS, the higher price for WCUs, and improved certainty over route to a relatively liquid market with relatively stable pricing, would substantially increase the investment incentive for UK afforestation development. The paper found that the inclusion of WCC into the UK-ETS would economically unlock (i.e. where the land's afforestation value becomes higher than its agricultural value as a result of improved carbon pricing) between 11% to 26% of total afforestable land in the UK, representing c.43k to 107k hectares of land.

The research finds that the impact of this is most significant in Wales and England. In Wales, the area of land economically viable for afforestation is estimated to be more than double the current economically viable afforestation area, with an area increase of between 119% and 248% estimated. In England, UK-ETS WCC admittance would likely unlock 15% to 41% of the land with afforestation potential for investment. In Scotland, the impact was considered subtle, as most land with afforestation potential already has a higher afforestation than agricultural value. Whilst land in Scotland does not become materially economically more viable as a result of WCC admittance into the UK-ETS, enhanced WCC carbon credit pricing is, all else equal, likely to further accelerate investment into Scottish afforestation projects, particularly with recent uncertainty created by announced budget reductions in Scotland under the Forestry Grant Scheme. However, the extent to which investment is accelerated and the uncertainty created by budgetary reductions is beyond the scope of this paper.

Overall, the paper estimates that 7.5-19m tonnes of atmospheric carbon dioxide, or equivalent, could be additionally and permanently sequestered as a result of WCC admittance into the UK-ETS, if all newly economically unlocked agricultural land with afforestation potential was converted into forestry over time.

The research also found that WCUs would have reached c.£180 per unit before all of the c.800k of land that Foresight Group has identified with afforestation potential would be economically unlocked for afforestation, all else equal.

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RECOMMENDATIONS

This policy paper recommends that the UK Government accelerate its consultation on WCC admittance into the UK-ETS. The UK Government should proceed to enable WCUs to trade on the UK-ETS without delay. That admittance would be an additional route to the market for developers and made in addition to other existing channels / VCM trading destinations. Doing so would likely materially increase the price of WCC carbon credits, enhancing the economics of woodland creation for developers and significantly accelerating national woodland creation rates, closing the gap to the UK achieving its ambitions for national tree planting.

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